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UNIVERSITY OF ILLINOIS

NEW SERIES, VOLUME FIVE

NUMBER FOUR

NOVEMBER, 1913

PUBLISHED BY THE COLLEGE OF THE PACIFIC

ISSUED IN FEBRUARY, MAY, AUGUST AND NOVEMBER

BULLETIN

OF THE

College of the Pacific

SAN JOSE, CALIFORNIA

Announcements for 1913-1914

The Spring Semester opens Wednesday, January 7, 1914.

The Dormitories are open for students one day before the Semester opens.

Students may enter the courses in Music, Art or Elocution at any time during the Semester.

One or more College courses in each department will be open to students entering at the beginning of the Spring Semester.

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SAN JOSE, CALIFORNIA

B. J. MORRIS, Acting President

Announcements for 1913-1914

CALENDAR FOR 1914.

1914	S	M	T	W	T	F	S	1914	S	M	T	W	T	F	S
Jan.	..	..	..	..	1	2	3	July	..	..	..	1	2	3	4
	4	5	6	7	8	9	10		5	6	7	8	9	10	11
	11	12	13	14	15	16	17		12	13	14	15	16	17	18
	18	19	20	21	22	23	24		19	20	21	22	23	24	25
	25	26	27	28	29	30	31		26	27	28	29	30	31	..
	..	..	..	..	..	..	..	Aug.	..	..	..	..	..	..	1
Feb.	1	2	3	4	5	6	7		2	3	4	5	6	7	8
	8	9	10	11	12	13	14		9	10	11	12	13	14	15
	15	16	17	18	19	20	21		16	17	18	19	20	21	22
	22	23	24	25	26	27	28		23	24	25	26	27	28	29
	..	..	..	..	..	..	..		30	31	..	..	..	..	..
Mar.	1	2	3	4	5	6	7	Sept.	..	..	1	2	3	4	5
	8	9	10	11	12	13	14		6	7	8	9	10	11	12
	15	16	17	18	19	20	21		13	14	15	16	17	18	19
	22	23	24	25	26	27	28		20	21	22	23	24	25	26
	29	30	31	..	..	..	..		27	28	29	30	..	..	..
Apr.	..	..	..	1	2	3	4	Oct.	..	..	..	..	1	2	3
	5	6	7	8	9	10	11		4	5	6	7	8	9	10
	12	13	14	15	16	17	18		11	12	13	14	15	16	17
	19	20	21	22	23	24	25		18	19	20	21	22	23	24
	26	27	28	29	30	..	..		25	26	27	28	29	30	31
May	..	..	..	..	..	1	2	Nov.	..	..	..	..	..	..	..
	3	4	5	6	7	8	9		1	2	3	4	5	6	7
	10	11	12	13	14	15	16		8	9	10	11	12	13	14
	17	18	19	20	21	22	23		15	16	17	18	19	20	21
	24	25	26	27	28	29	30		22	23	24	25	26	27	28
	31	..	..	..	..	..	..		29	30	..	..	..	..	..
June	..	1	2	3	4	5	6	Dec.	..	..	1	2	3	4	5
	7	8	9	10	11	12	13		6	7	8	9	10	11	12
	14	15	16	17	18	19	20		13	14	15	16	17	18	19
	21	22	23	24	25	26	27		20	21	22	23	24	25	26
	28	29	30	..	..	..	..		27	28	29	30	31	..	..

COLLEGE CALENDAR

First Semester

1913

- Nov. 26-Dec. 1 Wednesday noon to Monday night
Thanksgiving Recess
- Dec. 17-19 Wednesday-FridayExaminations
- Dec. 19 Friday noon.....Close of Fall Semester

Second Semester

1914

- Jan. 7 Wednesday....Beginning of Spring Semester
9 a. m. to 4:30 p. m. Registration of Students
- Jan. 8 ThursdayBeginning of Recitations
- Jan. 28 Thursday.....Day of Prayer for Colleges
- Feb. 23 MondayWashington's Birthday
- March 27-April 4 Friday noon to Saturday night
Spring Vacation
- April 24 FridayArbor Day
- May 12-13-14 Tuesday-Wednesday-Thursday
Final Examinations
- May 17 Sunday.....3 p. m. Baccalaureate Sermon
- May 18 Monday Afternoon and Evening
Class Day Exercises
Meeting of the Alumni
President's Reception
- May 19 Tuesday.....10:30 a. m. Commencement Exercises

BOARD OF TRUSTEES

R. V. WATT.....	President
E. R. DILLE.....	Vice President
H. E. MILNES.....	Secretary
J. LEITER.....	Treasurer
FIRST FEDERAL TRUST COMPANY, San Francisco	Custodian of Endowment

Class of 1914

A. H. BRIGGS.....	Los Gatos
W. C. EVANS.....	San Francisco
P. F. GOSBEY.....	San Jose
J. LEITER.....	San Jose
H. E. MILNES.....	Santa Cruz
I. J. TRUMAN	San Francisco
F. L. TURPIN	San Francisco

Class of 1915

J. H. BRUSH.....	Santa Rosa
D. C. CRUMMEY.....	Los Gatos
J. F. FORDERER.....	Alameda
R. B. HALE.....	San Francisco
G. D. KELLOGG	Newcastle
E. S. WILLIAMS.....	Saratoga
H. E. WILLIAMSON	Stockton

Class of 1916

E. R. DILLE.....	San Francisco
G. D. GILMAN.....	San Jose
H. B. HEACOCK	Pacific Grove
J. A. PERCY.....	San Francisco
R. T. STRATTON.....	Oakland
R. V. WATT.....	San Francisco
G. W. WHITE.....	Oakland

COMMITTEE OF THE BOARD OF TRUSTEES

Advisory: President of the College, Briggs, Crummey, Gilman, Leiter.

Finance: Williamson, Turpin, Kellogg.

Faculty: White, Dille, Gosbey, Gilman, Milnes.

Endowment, Real Estate and Investing: President of the Board of Trustees, President of the College, Brush, Gilman, Percy, Truman, Forderer.

Auditing: Gilman, Crummey, Heacock.

Budget: (By virtue of the By-laws) President of the College, Treasurer, Chairman of the Endowment, Real Estate and Investing Committee, Chairman of the Auditing Committee.

Library: Hale, Evans, Stratton.

Degrees: Dille, Milnes, White.

Building and Grounds: Hale, Evans, Williamson.

Laboratories: President of the College, Hale, Dille.

FACULTY

BERT J. MORRIS, B. D., A. M., Ph. D.

Acting President. Dean of all Students and
Registrar, Professor of Philosophy.

849 University Ave.

A. B. Kansas Wesleyan University, 1903; A. B., University of California (Philosophy and English), Dec. 1904; Pastor, Shattuck Avenue Church, Oakland, Cal., 1904-05; B. D., Pacific Theological Seminary, Berkeley, Cal., April, 1906; A. M., Harvard University (Philosophy and History of Religions) 1907; Ph. D., Boston University (Philosophy) 1908; Pastor, Fifteenth Avenue Church, San Francisco, 1908-09; Registrar and Professor of Philosophy, College of the Pacific, since August 1909; Dean of all Students, since April 1911. Acting President of the College since September 1913.

WESLEY CALEB SAWYER, A. M., Ph. D.

Professor Emeritus.

Berkeley.

A. B., Harvard, 1861, A. M., 1864; Theological Course at Concord, 1862-65; Courses of Study in Paris (Sorbonne), Berlin, Heidelberg and Goettingen, 1866-70; Ph. D., Goettingen, 1870; Teacher of Greek, Lasell Seminary, 1870-71; Teacher of German and History, University of Minnesota, 1871-74; Professor of Philosophy and German, Lawrence University, Wisconsin 1875-82; Institute Director and Professor of Social Science, Oshkosh Normal School, Wisconsin, 1882-85; Engaged in Literary Work in Germany, 1885-87; Professor, Vice-President, Acting President and Dean, College of the Pacific, 1888-95; Master in French and German, Belmont School 1895-98; Lecturer on Teutonic Mythology, College of the Pacific, 1901-03; Professor of German and French, 1903-08; Professor Emeritus, since 1908.

WARREN D. ALLEN*

Dean Pacific Conservatory of Music and
Teacher of the Piano. Helen Guth Hall.

Associate American Guild of Organists, 1909; Pupil of Rudolph Ganz and Alex. von Fielitz, Berlin, 1909 and 1911; Member of Busoni Class in Basel, Sept. 1910; Pupil of C. M. Widor, Paris, 1910; Dean of Pacific Conservatory of Music since August 1913.

*Faculty names arranged alphabetically irrespective of rank.

ESTHER HOUK ALLEN

Public School Methods and Assistant Teacher
of Voice Culture Helen Guth Hall.

Graduate Metropolitan School of Music, Indianapolis, 1907; Student American Institute of Normal Methods, Evanston, Illinois, 1907-08; Supervisor of Public School Music 1907-10; Student Damroch Institute of Musical Art; Pupil of Oscar Saenger and Bruno Huhn, New York City, 1910-11; Instructor in Music, Iowa State Teachers' College, 1911-12; Instructor in Music Summer Session University of California, 1911-12-13; Head of Department of Public School Methods and Assistant Teacher of the Voice Pacific Conservatory of Music since August 1913.

MISS MARIAN BARR, A. M.

Dean of Women, Instructor in German and
Latin. Helen Guth Hall.

A. B., (Dec.) 1904, University of California; A. M., (May) 1906; Teacher of Latin and German, California College, 1907-1910; Teacher of Latin and German and Dean of Women, College of the Pacific, since August 1910.

MISS HARRIET E. BOSS, A. B.

Librarian. Helen Guth Hall.

Ph. B., Albion College, 1897; Post-graduate, Chicago University, Spring and Summer, 1906; University Nashville, Summer 1908; Professor of English, Walden University, 1907-08; Professor of English, Philander Smith College, 1908-10; Studied library work in Chicago University and Los Angeles Public Library; Librarian, College of the Pacific, since January 1911.

MISS ETTA E. BOOTH

Instructor in Art. Helen Guth Hall.

Diploma, Massachusetts Normal Art School, Boston; Student of Academie Julian and Academie Delaclone, Paris, under the French Masters Bouguereau, Paul Delance and Callot; Pupil of Prof. Ertz and Prof. Vander Weiden, Paris; Solly Walter School of Illustration, San Francisco; Handicraft Guild, Minneapolis, Minn.; Principal of the School of Art, College of the Pacific, since 1898.

EDWARD VERE BREWER, A. M.

Instructor in German.

South Hall.

Western Reserve University, 1905-07; Under private tutors in German and French, 1907-08; Johns Hopkins University, 1908-09; Leland Stanford Junior University, A. B., 1910; A. M. 1913; Instructor in German, College of the Pacific, since August 1911.

GEORGE W. BRIGGS, A. B., M. S.

Assistant Professor of Mathematics.

873 McKendrie St.

B. S., Northwestern University, 1902; Professor of Political Science at Reid Christian College, Lucknow, India, 1903-04; M. S., Northwestern University, 1905; Pastor English Church, Lucknow, India 1904-06; English Church, Nain Tal, India, 1907-08; Professor of Political Science, Reid Christian College, 1908-09; Superintendent Bijnor District, India Conference, 1910-11; Fellow in Graduate School, University of California, 1911-12; Assistant Professor of Economics, College of the Pacific, 1912-13; Assistant Professor of Mathematics beginning Aug. 1913.

FLOYD C. BROWN, A. B.Instructor in Surveying and Mechanical Drawing.
Stanford University.

A. B. Leland Stanford Junior University December 1912; Assistant instructor at Leland Stanford in Descriptive Geometry, Mechanical Drawing and Lettering 1912. Acting instructor of Descriptive Geometry January-May, 1913, at Leland Stanford; Instructor in Surveying and Mechanical Drawing, College of the Pacific since September 1913.

PAUL DANIEL BRUN, A. M.

Professor of French and Spanish.

56 Lenzen Ave.

Université de France, French Master, Ackworth School, England, 1881-84; Instructor in French, Cornell University, 1884-88; A. M., College of the Pacific, 1909; Instructor in French in the College of the Pacific, since 1908; in French and Spanish, since August 1909; Professor of French and Spanish beginning August 1910.

SAMUEL R. COOK, M. S., A. M., Ph. D.

Professor of Mathematics, Physics and
Astronomy.

97 Randol Ave.

B. S., University of Michigan, 1895; M. S., 1897; A. M., University of Nebraska, 1898; Ph. D., Cornell University, 1905; Fellow in Physics, University of Nebraska; Instructor in Physics and Chemistry, Washburn College; Instructor in Physics, Case School of Applied Science; Fellow in Physics, Cornell University; Acting Professor of Physics and Astronomy, Allegheny College; Student in Berlin; Professor of Mathematics, Physics and Astronomy, College of the Pacific, since 1907.

* J. WILLIAM HARRIS, Ph. D.

Professor of Education.

East Hall.

A. B., Union College, 1901; Principal of High School, Ipswich, South Dakota, 1902-05; Student Clark University, Worcester, Mass., 1905-08, Ph. D., 1908; Assistant Professor of Education, De Pauw University, 1908-10; Professor of Education, College of the Pacific, beginning August 1910.

ALLEN MARSHALL KLINE, A. M., Ph. D.

Professor of History and Political Science.

896 McKendrie St.

A. B., University of Michigan, 1904; Graduate Student, 1904-07; Assistant in European History, 1904-05; in American History, 1905-06; Fellow in American History, 1906-07; Ph. D., 1907; Professor of History and Civics, Springfield (Ohio) High School, 1907-09; in History and Political Science, College of the Pacific, since August 1909.

LOUIS S. KROECK, B. S., A. M., M. S.

Professor of Biology.

520 Elm St.

B. S., College of the Pacific, 1895; A. M., Leland Stanford Junior University, 1897; M. S., College of the Pacific, 1898; Research work, Hopkins Biological Laboratory (Leland Stanford Junior University), three summers; California Academy of Sciences, two summers; Instructor in Biology, College of the Pacific, 1896-99; Professor of Biology and Geology, 1899-1904; Professor of Biology, since 1904.

*On leave of absence in Europe until January 1914.

MISS KATHARINE A. LUMMIS, A. M.

Instructor in Latin.

Helen Guth Hall.

A. B., Stanford University, 1907; Instructor in Latin, Eastern High School, Baltimore, Md., 1908-1910; Student in American School of Classical Studies, Rome, 1910-11; A. M., Stanford University, 1911; Instructor in Latin, College of the Pacific, since August 1912.

J. VICTOR MARTIN, A. M.

Professor of English.

510 Elm St.

Ph. B., Cornell College, 1898, and A. M., 1905; Lay Missionary to China, 1900; Instructor in English in Chinzei College, Nagasaki, Japan, 1900-1902; Instructor in English in Kumamoto Commercial School, Kumamoto, Japan, 1902-1904; Graduate Student University of Chicago, 1905-1906; Teacher of English in Wiley High School, Terre Haute, Indiana, 1906-1908; Associate Professor of English Language and Literature, Dakota Wesleyan University, 1908-1913; Professor of English, College of the Pacific, since August 1913.

MISS ESTHER C. MACOMBER, B. M.

Instructor in Elocution.

275 S. Whitney St.

Graduate, California School of Elocution and Oratory, San Francisco, 1895; Postgraduate, 1899; Graduate, Greeley School of Elocution and Dramatic Art, Boston, 1901; B. M., College of the Pacific, 1908; Teacher of Elocution, College of the Pacific, since August 1907.

WILBUR MCCOLL.

Teacher of Pianoforte, Pipe Organ and Pianoforte Normal Course.

Piedmont.

Pupil of Adolph Ruthardt, Geneva, Switzerland, 1882-84; Student, New England Conservatory of Music, 1885-86; Pupil of Arthur Foote, 1886-87; Student, Munich Royal Conservatory, 1888-89; Pupil of Busoni, 1891; Pupil of Ernst Perabo, 1894; Teacher of the Pianoforte, Pacific Conservatory, since 1896.

WILLIAM J. McCOY.

Teacher of Musical Theory and History.

Oakland.

Studied piano with Creswick and Reinecke and Theory and Composition with Reinecke and Hauptman (Leipsic, Germany); Composition and Orchestration with Sellinick (Paris, France); Special Lecturer on Music, University of California, Composer of Songs, Choral and Orchestral works and Music Drama "The Hamadryads"; Professor of Musical Theory and History, College of the Pacific, since January 1909.

GEORGE A. MILLER, A. B., D. D.

Lecturer on World Problems. 80 S. Sixth St.

A. B., Leland Stanford Junior University, 1898; Pastor of the First M. E. Church in Fresno from 1900-04; of the Central M. E. Church in Manila, P. I., 1904-06; Acting Superintendent Central District, Philippines, 1906; Field Secretary China Missionary Centennial, 1907; Pastor Hamilton M. E. Church, San Francisco, September 1908-09; Pastor 1st M. E. Church, San Jose, since September 1909; Lecturer on Missions, College of the Pacific, since August 1909.

ROLAND NEAL, B. S., A. M.

Professor of Chemistry and Geology.

771 Chapman St.

A. B., Cornell College, 1904; A. M., 1907; Graduate Student, University of Chicago, 1907; Professor of Natural Science, Dakota Wesleyan University, 1907-09; Fellow by courtesy, John Hopkins University, 1908-10; Professor of Chemistry and Geology, College of the Pacific, since September 1910.

MISS NELLA ROGERS

Teacher of Voice Culture. Helen Guth Hall.

Student in Oberlin Conservatory, 1885-86; Pupil of Frau von Milda, Weimar, 1892; Pupil of Graziana, Berlin, 1896; Pupil of Madame de la Grange, Paris, 1897; Instructor in Vocal Music, Onarga Conservatory, 1886-88 and 1890-93; Teacher of Voice Culture, Pacific Conservatory, since 1897.

RUFUS T. STEPHENSON, A. M., Ph. D.

Professor of Greek and Latin.

871 Hedding St.

A. B., Drury College, 1899; Professor of Greek and Latin, Kansas Wesleyan University, 1899-1901; in St. Johnsbury (Vt.) Academy, 1901-04; Instructor in Greek and Latin, Washington University (St. Louis), 1904-05; Graduate Student, Greek and Latin, Yale, 1905-06; A. M., Yale, 1906; Graduate Student, Leland Stanford Junior University and Instructor in Greek, Belmont School, 1906-09; Ph. D., Leland Stanford Junior University, 1909; Professor of Greek and Latin, College of the Pacific, since August 1909.

JOHN S. TROXELL, Ph. B., S. T. B.

Teacher of the Bible. 625 S. Second St.

Student Nebraska Wesleyan; Ph. B., Missouri Wesleyan, 1903; Graduate Student, Northwestern University, 1904-05; S. T. B., Garrett Biblical Institute, 1906; Teacher of the Bible, College of the Pacific, beginning August, 1913.

MISS OLA ELIZABETH WINSLOW, A. B.

Assistant Professor of English. Santa Clara.

A. B., Leland Stanford Junior University, 1906; Teacher of English, Irving Institute, San Francisco, 1907-08; National Training School, San Francisco, 1908-10; College Park Academy, since August, 1910; Instructor in English, College of the Pacific, since August 1911, Assistant Professor of English beginning August, 1912.

FACULTY COMMITTEES

1. **Advisory:** Brun, Cook, Kline, Kroeck, Neal, Stephenson.
2. **Registration:** Neal, Briggs, Kline, Kroeck, Stephenson.
3. **Scholarship:** Stephenson, Brun, Kline, Neal.
4. **Standing of Students:** Morris, Briggs, Brun, Cook, Harris, Winslow.
5. **Student Affairs:** Morris, Barr, Briggs, Cook, Harris.
6. **Library:** Kline, Brewer, Cook, Kroeck.
7. **Athletics:** Martin, Brown, Macomber.
8. **Schedule:** Kroeck, Stephenson, Winslow.
9. **General Assembly:** Morris, Briggs.
10. **Student Publications:** Briggs, Lummis, Martin.

Acting Registrar: Neal.

Assistant Registrar and Accountant: Miss Effie Detrick.

Secretary to the Faculty: Neal.

Secretary to the President: Miss Winifred H. Bryant.

GENERAL INFORMATION

Origin

The College of the Pacific was granted a charter under the name of "The President and Board of Trustees of the California Wesleyan College" by the Supreme Court of California on the tenth day of July, 1851, and is the first educational institution in California to receive a State charter. The Board of Trustees, at its first meeting on the fifteenth day of August, 1851, elected to change the name to University of the Pacific and the State Legislature granted a charter under this name on the twenty-ninth day of March, 1852. The Board of Trustees at its first meeting also resolved "that the College shall be open to such females as may desire to pursue a college course." The institution was opened for students in the town of Santa Clara on Monday, the second day of May, 1852. Fifty-four students were enrolled within six weeks. A new charter was granted by the Legislature on the ninth day of July, 1855. In 1866 the Trustees of the University acquired a tract of four hundred acres of land lying between the towns of Santa Clara and San Jose in the district known as College Park. This tract extended from Polhemus Street on The Alameda to Newhall Street, and from The Alameda back to the Guadalupe Creek. Some twenty acres were set aside for the University purposes and in 1871 the institution was removed from Santa Clara to its present site in College Park.

Although bearing the name of University the institution never attempted any distinct university work. It founded in the late fifties the first medical school in the State. This medical school was incorporated later as the Cooper Medical School of San Francisco, which

in turn was acquired by the trustees of Leland Stanford Junior University and now forms the medical department of the last named institution. In 1896 Napa College, situated in Napa, California, was consolidated with, and its graduates were enrolled as alumni of, the University of the Pacific. In order more nearly to designate the work of the institution the Trustees of the University voted to change the name University of the Pacific to College of the Pacific. This was accomplished through court proceedings on the twenty-fourth day of June, 1911. The aim of the institution is to be a College of the first rank. It is equipped to give the best instruction of collegiate grade and the standards of teaching and scholarship are held high.

Location

College Park is situated between San Jose and Santa Clara on the main line of the Southern Pacific. The College campus is located two blocks from the old Mission Road, the Alameda, the principal thoroughfare between San Jose and Santa Clara and one of the beautiful residence avenues in the State. The campus commands a view of both the Santa Cruz and Mt. Diablo ranges which lie on either side of the valley. Mt. Hamilton, on the summit of which Lick Observatory is situated, is reached by a drive of twenty-eight miles. This drive is one of the finest and most picturesque in California. San Jose is a prosperous city of some thirty-five thousand inhabitants, one hour and ten minutes by fast train from San Francisco on the Southern Pacific, and easily accessible from all parts of the State. The beauty and fertility of the famous Santa Clara Valley in which the institution is situated give the surroundings of the College a most pleasing and attractive aspect. The climate is mild and invigorating. San Jose, known as the "Garden City" of California, has beautiful homes, numerous churches and schools,

a good library, besides other healthful attractions, and affords the students many advantages connected with city life. College Park is within ten minutes ride of San Jose or Santa Clara by electric car.

Buildings

There are eight buildings on the campus, the three oldest being West Hall, (the College building), South Hall and Central Hall. The two latter, until recently, were used for Women's Dormitories. Central Hall is used for dining room purposes. Owing to the growing needs of the Conservatory of Music, South Hall has been almost entirely adapted for the use of Conservatory teachers and students. East Hall, a large brick building, used as a Dormitory for men and also as class rooms for the Academy and laboratories, was built twenty-five years ago. A large and well appointed Conservatory of Music building was erected twenty years ago. This building has an auditorium with a seating capacity of one thousand, the offices of administration, teaching and practice rooms, and also the two well situated and pleasingly furnished rooms of the women's Literary Societies, Emendia and Sopholechtia.

Helen Guth Hall and Gymnasium

Four years ago the Trustees built a large and modernly appointed dormitory for women. This is a building striking in architecture and provides a comfortable home for women living on the campus. During the summer of 1910 a new gymnasium was constructed in the same style of architecture as the dormitory. It is situated in the Eucalyptus Grove and has a floor of standard size for athletic contests. It is well appointed in rooms and shower baths and fully equipped for physical training work. It has a stage for student

productions, and the main floor of the building with the gallery makes a large auditorium for assembly purposes.

Pipe Organs

During the summer of 1910, a new pipe organ of exceptionally fine concert type, of three manuals, with all the latest improved mechanical attachments and combinations, was built for the Conservatory of Music by the W. W. Kimball Company of Chicago. It is the largest pipe organ in any Conservatory of Music west of Chicago and one of the largest pipe organs in the State of California. To meet the needs of the increasing pipe organ classes, a two manual pipe organ, formerly belonging to the First Methodist Church in San Jose, and donated to the College by that church, was entirely rebuilt, and is installed in the assembly room of South Hall.

New Campus

In the Spring of 1910 the College Trustees purchased a tract of seven acres on The Alameda, two blocks distant from the old campus. Additional property in this neighborhood has been purchased during the past year. Adjoining this is the President's home on the corner of The Alameda and Emory Street.

Equipment

The library occupies more than one half of the first floor of West Hall. Ten thousand volumes are on the shelves to which the faculty and students have free access.

Laboratories

The entire ground floor of East Hall is occupied by the science departments. There are ten rooms equipped with gas, water, desks, and apparatus for laboratory

work. The physical laboratory, occupying a large, well lighted room, is provided with suitable tables and the necessary apparatus for work in this department. The chemical laboratory consists of six rooms adapted to the various operations of chemical study. One laboratory is used for general experimentation, another for qualitative analysis, and others for quantitative analysis, organic chemistry, and assaying. There is also a room for balances, a store room, and a dark room for studies in photography and for experiments in polarimetry, spectroscopy, and refractometer measurements.

During the past three years a good equipment for elementary physics has been supplied. The equipment in the biological department has been enlarged, and generous additions have been made to that in chemistry, geology, and mineralogy.

Jacks-Goodall Observatory

The Observatory is furnished with a six-inch equatorial telescope, a four-inch portable telescope with altitude and azimuth mounting, a transit and zenith telescope, sextants, and other necessary equipment. The six-inch telescope was manufactured by Alvan Clark & Sons, and is furnished with all necessary accessories, such as a driving clock, finely divided circles, filar micrometer. The transit and zenith telescope, manufactured by Messrs. Fauth & Co., is of the pattern extensively used on the U. S. Coast and Geodetic Survey. These instruments afford ample facilities for the study of practical astronomy.

Government

While under the patronage of a denomination the College is not, and never has been, sectarian. It stands for moral culture and the development of character. Its government rests on the principle that self control is

the central power in a highly developed life. The aim is to encourage and stimulate the student in the development of right habits. The endeavor is to form character, not to reform it. Rules are few and simple, and are designed to protect and assist the student in making the most of his college life. Where it is evident that a student does not care either for good conduct or high scholarship his presence will not be tolerated.

In the interest of health, morals, and the profitable use of time, the trustees and the faculty oppose the use of tobacco and of intoxicating beverages, the visiting of saloons, billiard halls and pool rooms, the playing of cards, and the use of improper language.

Religious Life and Work

Students are admitted to the College without condition as to religious belief or church membership. But all patrons, whatever their views concerning religious doctrines and social usages, are expected to recognize the spirit and purpose of the College as indicated in its history, and to cooperate in promoting its endeavors in the field of education. All proper latitude is allowed to the individual conscience. Students are expected to attend Chapel exercises, not only because these exercises consider the spiritual needs of the College community, but also because they conserve the unity of student life, and give an opportunity for announcing College events and promoting College interests. Students are expected to attend church at least once each Sunday and to observe the day in a proper manner.

Social Life

The social life of the College fosters friendship between the faculty and students. In this regard the students are given such freedom as will not interfere with their class room work or allow them to lose sight of the fact that the primary object of attending College is study.

Student Organizations

The organized student life is an important factor in the work of the College. A general assembly is held once a month to hear addresses, and to stimulate College enthusiasm.

Student Body. The Student body directs and supports all general student activities of the College. Its regular meetings are held on the first Wednesday of each month.

Christian Associations. The Young Men's Christian Association and the Young Women's Christian Association endeavor to promote the religious and social welfare of the students. They hold meetings each week. Prominent representatives from other institutions and pastors of various denominations address these meetings from time to time.

Literary Societies. There are two literary societies for men in the College and two for women. They are a means of social and literary culture.

Expenses

The charges are moderate, considering the advantages afforded. Extravagant fashions, compelling unnecessary personal expenses, do not prevail among the students. Every encouragement is given to young men and women who desire to obtain an education with the smallest possible expenditure.

Board and Room

The charge for board is \$90 for the Fall Semester and \$100 for the Spring Semester. This must be paid in advance in three equal installments. Students are required to pay a dining-room fee of \$1.00 a semester. Rebate for board will be allowed only for an absence of more than two weeks and then only by special arrangement when the office has been previously notified.

Rooms in the College dormitories (including light, heat, and the laundering of towels and bed linen) may be rented from \$12.00 to \$35.00 a semester. They are

supplied with the necessary furniture, mattress and pillows. Students are expected to provide bed clothing, towels, and such other articles as rugs, pictures, curtains, which they may desire to render their rooms more attractive.

It is expected that all women students board and room in one of the dormitories on the campus. A house fee of \$2.50 a semester will be charged women rooming in Helen Guth Hall. No student coming from a distance is allowed to room off the campus without special permission.

Fees*

There is no tuition fee in the College. Every student, at the beginning of each semester, is required to pay a registration fee of \$15.00, and also a library fee of \$1.00

Students taking in one semester more than 18 units of work, (i. e. 18 class exercises or an equivalent in class or laboratory work), will be charged an extra fee of \$10.00; if more than 20, an extra fee of \$25.00. Permission to take more than 18 units of work a semester must be obtained from the Faculty. This permission is granted only in unusual cases.

Payment of Bills

All bills are payable in advance. This rule will be *strictly* adhered to. No credit will be allowed on fees or room rent. Board may be paid in installments as above stated, by arrangement with the business office. No student will be graduated unless his or her financial obligations at the College are fully met. If it becomes necessary for a student to leave on his or her own account before the end of the semester, allowance on board will be made but not for fees or room rent.

* See also last page of this bulletin.

I. UNDERGRADUATE STANDING

Candidates must be at least sixteen years of age. They must present satisfactory recommendations as to personal character, and, if from other colleges or universities, must bring letters of honorable dismissal.

Entrance Subjects

The standard of preparation is the four years' high school course. The proper co-ordination of high school subjects for the individual pupil is regarded as primarily a problem for the secondary school; the College is prepared to recognize for entrance credit any subject having an established place in the secondary school curriculum, in which adequate instruction is given and which is pursued with satisfactory results.

No prescription is made as to entrance subjects except that all candidates for admission must satisfy the English department as to their proficiency in English. Candidates may choose freely from the list of thirty-eight subjects enumerated below. Where College courses imply previous training candidates must obviously offer such elementary subjects as are necessary for the continuation of such courses in College.

An *Entrance Unit* represents a subject pursued in the secondary school for one year, with not less than one hundred and fifty recitation periods of forty-five minutes each, two laboratory periods being counted as the equivalent of one recitation period.

ENTRANCE SUBJECTS

- | | |
|--------------------------------------|--|
| 1. Elementary English (2) | 17. Medieval and Modern History (1) |
| 2. Intermediate English (1) | 18. English History (1 or $\frac{1}{2}$) |
| 3. Advanced English (1) | 19. American History ($\frac{1}{2}$) |
| 4. Elementary Latin and Cæsar (2) | 20. Civics ($\frac{1}{2}$) |
| 5. Cicero and Latin Composition (1) | 21. Elementary Algebra (1) |
| 6. Virgil and Latin Composition (1) | 22. Intermediate Algebra ($\frac{1}{2}$) |
| 7. Elementary Greek and Xenophon (2) | 23. Advanced Algebra ($\frac{1}{2}$ or 1) |
| 8. Homer and Greek Composition (1) | 24. Plane Geometry (1) |
| 9. Elementary German (2) | 25. Solid Geometry ($\frac{1}{2}$) |
| 10. Intermediate German (1) | 26. Plane Trigonometry ($\frac{1}{2}$) |
| 11. Advanced German (1) | 27. Physics (1) |
| 12. Elementary French (2) | 28. Chemistry (1) |
| 13. Intermediate French (1) | 29. Physiography (1) |
| 14. Advanced French (1) | 30. Botany (1) |
| 15. Elementary Spanish (2) | 31. Zoology (1) |
| 16. Ancient History (1) | 32. Physiology (1) |
| | 33. Freehand drawing (1) |
| | 34. Geometrical Drawing (1) |
| | 35. Commerical Subjects (1-4) |
| | 36. Music (1) |
| | 37. Domestic Science (1-2) |
| | 38. Hygiene (1) |

Entrance on Recommendation

Undergraduate standing, without further tests, will be granted to graduates of approved preparatory schools who have completed a four years' course, amounting to not less than *fifteen* entrance units, and who are fully recommended to the College.

Full recommendation implies a recommending grade considerably higher than the lowest passing grade, with provision that low passing grades in a particular subject or subjects may be offset by a general high average or by decided intellectual promise. Where the course of study includes the newer subjects, in which high school standards are not fixed, evidence of fitness as to the quantity and quality of work must be

given; in music the candidate will be expected to pass the examinations of the Dean of the Conservatory of Music.

Recommendations will be considered at any time of the year, but, since, in general, candidates cannot be assured of admission to the College without examination in one or more subjects, it is important that credentials be forwarded as early as possible.

Blanks for admission on recommendation may be obtained from the Registrar.

Entrance on Examination

Undergraduate standing will be granted to candidates who present on examination (or partly on examination and partly on recommendation) *fifteen* entrance units.

Statement of Entrance Subjects in Detail

English

1. Elementary English. (2 points.) (a) Composition and Grammar. A written test on the theory of grammar and Composition, to be followed by an essay upon a subject assigned at the time of examination.

(b) Rhetoric. Punctuation and paragraphing, the principal figures of speech, and the leading principles of expression, from such a text-book as Genung's Outlines of Rhetoric or Lockwood and Emerson's Composition and Rhetoric.

(c) Classical Mythology. Gayley's Classic Myths in English Literature.

(d) Literature. The amount of work required may be indicated by the following selections: (1) The Alhambra, or Ivanhoe; (2) The Lady of the Lake; (3) Poetry of the People—Gayley and Flaherty; (4) The Merchant of Venice; (5) Julius Cæsar; (6) The following Poems: The Deserted Village, The Cotter's Saturday Night, Tam O'Shanter, The Ancient Mariner, Selections from Childe Harold, Horatius, Snow Bound; (7) The following essays and addresses: Emerson's The Fortune of the Republic, The American Scholar, Lowell's Democracy.

2. Intermediate English. (1 point) Milton's *L'Allegro*, *Il Penseroso*, *Comus*, and *Sonnets*, Tennyson's *The Princess*, or selections from *Idylls of the King*, Lowell's *The Vision of Sir Launfal*, and the *Commemoration Ode*; Addison's *Sir Roger de Coverley*; Macaulay's *Warren Hastings*; Burke's *Speech before the Electors at Bristol*, Macaulay's *First Speech on the Reform Bill*, Webster's *Reply to Hayne*; Thackeray's *The Newcomes*.

3. Advanced English. (1 point.) Poems: Chaucer's *Prologue to the Canterbury Tales*; Milton's *Lycidas*, and *Sonnets*; Dryden's *Alexander's Feast*; Gray's *Elegy*; Wordsworth's *Laodamia*, *Tintern Abbey*, *Ode on the Intimations of Immortality*, *Ode to Duty*, and *Sonnets*; Keat's *Eve of St. Agnes*, and the *Nightingale*; Shelley's *The Cloud*, and the *Skylark*; Browning's *A Transcript from Euripides* (in *Balaustion's Adventure*); Arnold's *Scholar Gypsy*, and *The Forsaken Merman*; Tennyson's *Oenone*; Emerson's *Compensation*, and *Self-Reliance*; Burke's *Speech before the Electors at Bristol*; Shakespeare's *Macbeth*.

Latin

4. Elementary Latin and Caesar. (2 points.) Latin grammar (Bennett, Allen and Greenough, or Hale and Buck), with special attention to the quantity of vowels; Cæsar's *Gallic War*, books 1-4; Latin prose composition. An equivalent amount from Nepos, or Sallust, or from an approved book of selections, will be accepted as a substitute for a part of the requirement in Cæsar.

5. Cicero and Latin Composition. (1 point.) Six orations of Cicero, including the four orations against Cataline, the oration for Archias, and the oration on Pompey's Military Command; Latin prose composition.

6. Virgil and Latin Composition. (1 point.) Six books of Virgil's *Aeneid*; scansion of Latin hexameter verse. Latin composition. Bennett's *Latin Composition for Secondary Schools* will indicate the grade and amount of work required in composition.

Greek

7. Elementary Greek and Xenophon. (2 points.) Goodwin's *Greek Grammar*; Xenophon's *Anabasis*, books 1-4. Greek composition, Collar and Daniell's or an equivalent.

8. Homer and Greek Composition. (1 point) Homer's *Iliad*, books 1-3, or the *Odyssey*, books 1-4; scansion of Homer's verse. Pearson's *Greek Composition*, or an equivalent.

German

9. Elementary German. (2 points.) Familiarity with the essentials of German Grammar, especially inflections and word order. Pronunciation. German script. The reading of at least 150 pages of easy German, accompanied by suitable exercises in composition and conversation. Translation. Sight-reading.

10. Intermediate German. (1 point.) The reading of at least 150 pages of moderately difficult prose and poetry, principally from modern writers. Continuation of grammatical study. Translation. Letter-writing. Sight-reading. Conversation.

11. Advanced German. (1 point.) The reading of about 600 pages, principally from classical writers, especially Goethe, Schiller and Lessing. Translation. Speaking and writing in German. More difficult grammatical construction.

French

12. Elementary French. (2 points.) A thorough knowledge of the elements of French grammar. Pronunciation. The reading of at least 200 pages of easy French, accompanied by simple exercises in conversation and composition. Translation.

13. Intermediate French. (1 point.) The reading of at least 300 pages from moderately difficult writers of the nineteenth century. Translation. Conversation. Sight-reading. Prose Composition. Grammar continued.

14. Advanced French. (1 point.) The reading of at least 400 pages from classical writers, such as Corneille, Racine, and Molière. Translation. Composition. Conversation.

Spanish

15. Elementary Spanish. (2 points.) A thorough knowledge of the elements of Spanish grammar. The reading of at least 200 pages of easy Spanish.

History and Civics

The History Syllabus (Heath) is a desirable basis for the work in each course. When a text is used it should be supplemented with reading, notes and maps.

16. Ancient History. (1 point.) (a) Greece, with special emphasis on classical geography. West, Myers or Botsford, or an equivalent, may be the basis of the work.

(b) Rome, with the emphasis on geography and on social and political institutions. West, Myers or Botsford, or an equivalent.

17. Medieval and Modern History. (1 point.) A general course in medieval and modern history, extending through a year. History Syllabus (Heath), or Adams, Myers, West, Robinson, or an equivalent, as a basis. The work should be done by modern methods.

18. English History. (1 point.) A general survey of the history of England from prehistoric times to the present. N. E. History Syllabus, Cheyney, Andrews, or an equivalent.

19. American History. ($\frac{1}{2}$ point.) Channing's Students' History, McLaughlin's American Nation, or an equivalent.

20. Civics. ($\frac{1}{2}$ point.) Bryce's American Commonwealth (abridged). Foreman, Guitteau, James and Sanford, or an equivalent.

Mathematics

21. Elementary Algebra. (1 point.) The more elementary principles and the fundamental laws of Algebra, with a thorough drill in the solution of problems. The laws of exponents for positive and negative integers; factoring with application to the lowest common multiple and highest common factor. Simultaneous equations of the first degree, and simple quadratic equations, ratio and proportion. Some applications of graphic methods are introduced.

22. Intermediate Algebra. ($\frac{1}{2}$ point.) Algebraic theory; square and cube root of polynomials; fractional and negative indices. Theory of quadratic equations and the proof of the binominal theorem for positive and integral exponents.

23. Advanced Algebra. ($\frac{1}{2}$ or 1 point.) An additional point, or half point, in algebra, may be granted for a corresponding amount of work upon connected topics in advance of those of intermediate algebra. Credit in this subject will not be accepted as an equivalent for any college mathematics, except upon special examination.

24. Plane Geometry. (1 point.) The fundamental propositions of plane geometry: including the general properties of plane figures and the measurement of angles and areas. Particular emphasis should be laid upon construction problems, the practical applications of geometry, and the solution of original exercises. Wentworth and Smith's New Plane Geometry represents a good basis for this work.

25. Solid Geometry. ($\frac{1}{2}$ point.) Selected supplementary propositions of plane geometry; the fundamental propositions of geometry of space and the sphere, with problems in the mensuration of solids; and practical original exercises. Stress should be placed upon the practical value of the work, particularly in the character of the original exercises selected.

26. Plane Trigonometry. ($\frac{1}{2}$ point.) The general formulæ of plane trigonometry, with applications to the solution of plane triangles and the measurement of heights and distances. The theory of logarithms and the use of logarithmic tables should be emphasized.

Science

27. Physics. (1 point.) Recitations and laboratory experiments. Notes on experiments approved and signed by the teacher in charge.

28. Chemistry. (1 point.) Recitation should cover the metals and non-metals and such of the theory as is usually treated in the standard elementary texts. The applicant should present his laboratory note-book approved by the teacher.

29. Physiography. (1 point.) Recitations from such a text-book as Salisbury's Briefer Course, and full laboratory work. The note-book, approved by the teacher is required.

30. Botany. (1 point.) The work in botany should be chiefly laboratory and field work; but by field work is not meant the mere collecting and naming of plants; neither must the attention be wholly confined to flowering plants. Laboratory notes, approved and signed by the teacher, must be submitted.

31. Zoology. (1 point.) In Zoology the candidate should have gained his knowledge principally through actual work with animals in the field and laboratory. Not less than four hours a week throughout the year should be spent in this way. Laboratory note books should be submitted.

32. Physiology. (1 point.) A general knowledge of the structure and physiology of the human body and of the principles of hygiene. The equivalent of Huxley's Physiology, or Martin's Human Body (Briefer Course.)

Drawing

- 33. Freehand Drawing. (1 point.)
- 34. Instrumental Drawing. (1 point.)

Other Subjects

- 35. Commercial Branches. (1-4 points.)
- 36. Music. (1 point.)
- 37. Domestic Science. (1-2 points.)
- 38. Hygiene. (1 point.) One physical training period twice a week for two years and one lecture period a week for one year.

Advanced Standing

Students coming from other colleges whose requirements are substantially equal to those of this institution can generally attain the same rank here that they held in the institution from which they came. But this is not to be taken for granted.

Special College Standing

On recommendation of the heads of the departments concerned, applicants of mature years may be admitted to the status of special college students, with the privilege of pursuing special studies for which they are prepared, without being required to pass the entrance examinations. Such students may be classed as regular on fulfilling the entrance requirements.

Undergraduate Work

The courses of study given in the College lead to the degree of Bachelor of Arts and are arranged in accordance with the major plan. All students are required to choose a department in which the major part of their work shall be done. First year students may change their major subject at the end of the first or second semester without petition. After the first year the major subject may be changed only on petition and when consent has been given by the departments concerned.

The degree of Bachelor of Arts is granted to those completing the required hours of work in one of the courses designated below.

Biblical Science	Geology
Biological Science	German
Chemistry	Greek Language and Literature
Education	History and Political Science
English Language and Literature	Latin Language and Literature
French	Mathematics
	Philosophy
	Physics

Courses covering the first two years of the four year course and the first three years of the five year course in Civil, Mechanical, Electrical, Chemical and Mining Engineering are offered.

The degree of Bachelor of Music is granted to major students in music who complete satisfactorily sixty-four units of regular college work, forty units of applied music and twenty units of harmony and theory of music.

Requirements for Graduation

No student will be graduated who has not spent at least one year in residence.

One hundred and twenty-four units of class room work are required for graduation. The major requirement is at least twenty-four units in the department which the student elects as his Major. The student shall also take fifteen additional units under the direction of his Major Professor. Of the eighty-five remaining units the student shall take one unit of Bible study, four units of Physical Training, six units of English, and also thirty units of general culture studies under the guidance of the Registration Committee, leaving forty-four units of free electives. The requirement of fifteen additional units to be taken under the guidance of the Major Professor is for the purpose of directing the student along some one specific line of study. The requirement of thirty units to be taken under the guidance of the Registration Committee is for the purpose of securing to the student as wide a range of subjects as is necessary for a broad, liberal education and to save him from the waste of time and energy which results from a haphazard choice.

The Master's Degree

Graduates who have received from this College or any other institution of like grade the Bachelor's degree in Arts or Science, may receive the corresponding Master's degree on the satisfactory completion, in residence, of one year of graduate work beyond baccalaureate requirements, and on the presentation of a satisfactory thesis on an approved topic. The degree may be conferred upon graduates of the College of the Pacific, on the completion of two years of graduate study in other approved institutions upon the recommendations of the faculties of said institutions and on the presentation of a satisfactory thesis on an approved topic.

COURSES OF INSTRUCTION

1912-1913

ASTRONOMY

PROFESSOR COOK.

The courses in Astronomy are arranged for two classes of students, first, those who desire a knowledge of the facts and theories of Astronomy for culture value; and second, those who desire a knowledge of Astronomy for its practical applications. Courses 1 and 2 are general and fundamental, and will give the student a liberal knowledge of the subject. Course 4 will introduce many of the newer problems of Astrophysics.

1. General Descriptive Astronomy. An elementary course, purely descriptive and non-mathematical. The course will consist of lectures, recitations, and readings, and evenings with the telescope. Elective. Two hours throughout the year.

2. General Astronomy. A more advanced course in the fundamental principles and laws of astronomy. The course will consist of lectures, recitations, and readings, as in course 1, and a short course in practical astronomy, including the determination of time, latitude and longitude, with the sextant and transit. Prerequisites: Mathematics 1, 2, 3, and 5, Elective. Three hours throughout the year.

3. The Method of Least Squares. The fundamental principles of the method of least squares, with applications to the determination of mathematical measurement, especially those of astronomical observations. Elective. Presupposes Mathematics 1 and 6. Two hours for one semester.

4. Astrophysics. A general course in the problems of astrophysics. Lectures, recitations and readings. Elective. Two hours, either semester.

BIBLICAL SCIENCE

PRESIDENT GUTH, MR. TROXELL.

It is the aim of this department to train the student in the constructive methods of biblical and religious study and thus to open the way for a permanent interest in these vital themes.

1. **Biblical Introduction.** A general introduction to biblical study, covering in outline the traditional story of the Hebrew race, the rise of the Hebrew sacred literature, the life of Jesus Christ, the development of the New Testament writings, and the history of the transmission of the Bible to our own day. The purpose of the course is to give a connected acquaintance with the data which form the basis of biblical study. Lectures and references. One hour, first semester.

2. **Christian Origins.** An investigation of the development of the great types of Christian thought, together with the historic institutions in which they have characteristically expressed themselves. Two hours, first semester. Prerequisite, course 1.

3. **Teaching of Jesus.** The method of Jesus' teaching, the way in which he regarded truth, is emphasized rather than the content of his teaching. Two hours; second semester. Prerequisite, course 2.

4. **Philosophy of Religion.** A study of religious phenomena and beliefs. Two hours, first semester.

5. **Philosophy of Christianity.** Beginning with an historical study of the Jewish religion and of the beginnings of Christianity, a careful study is made of the fundamental principles of the Christian religion. Two hours, second semester.

6. **The Development of Doctrine and Creed.** This course aims to give a comprehensive understanding of the development of religious belief from Old Testament times to the present day. Two hours, first semester.

7. **Bible Study.** The new Testament, book by book, is studied in this course with special emphasis upon the Gospels during the first semester and upon Paul's writings in the second. Two hours throughout the year. (Mr. Troxell).

BIOLOGIC SCIENCES

PROFESSOR KROECK.

The courses in the Biologic Sciences are intended to provide instruction, first, that will fit into the general scheme of a liberal education, second, that will in the future enable the student to interpret and study the facts of nature without the guidance of an instructor, and, third, that will prepare the student to pursue such professional studies as medicine, dentistry, pharmacy, or nursing, and such technical studies as forestry, horticulture, and agriculture.

1. **General Biology.** Fundamental principles of animal life. Type animals, mostly invertebrates, will be studied in the laboratory. The lectures, recitations, and assigned readings will include topics giving a rather wide range of information. The course will call for considerable observation. One lecture, or recitation, and six laboratory hours per week. Three units, both semesters.

2. **Vertebrate Biology.** In some features a continuation of the course in General Biology, but here attention will be directed chiefly to the life and structure of the higher vertebrates. Studies often passing under the name of physiology, but which are really anatomic, are included in this course. Courses 1 and 2 may be taken at the same time. One lecture and three laboratory hours per week. Two units, both semesters.

3. **Physiology.** Including all the phases of human physiology as the term is commonly understood. Prerequisites, courses 1 and 2. Courses 2 and 3 may be taken at the same time. One lecture, or recitation, and six laboratory hours per week. Three units, both semesters.

4. **Embryology.** The knowledge of how organs of the animal and human body come to be is essential to a satisfactory knowledge of physiology, anatomy, and histology. Lectures, recitations, demonstrations, and laboratory work. Two units both semesters.

5. **Histology.** A study of the minute anatomy of the human body. In general the tissue and organs will be taken from mammalian animals, and so selected as best to demonstrate the same structures in the human body. Lectures,

recitations, demonstrations, and laboratory work. Two units, both semesters.

6. **Anatomy.** A comparative study of the anatomy of vertebrates. This is a foundation course of the study of human anatomy undertaken in the medical schools. Lectures, recitations, demonstrations, and laboratory work. Three units, both semesters.

7. **Botany.** A study of representative plants of the chief groups and the fundamental principles of plant life, relationship and evolution. Three units, both semesters.

8. **Bacteriology.** (Microbiology.) The rapid advances made in this department of science, its practical nature, and the requirements of professional schools, make it necessary that bacteria yeasts, molds and some of the infusoria be studied as a separate course, apart from botany or zoology. Lectures, recitations, demonstrations, and laboratory work. Three units, second semester.

9. **Lectures in Biology.** These lectures cover a wide range and vary from year to year. They are intended to give the student an insight into a few of the generalizations of biology and to bring before him some of the more important problems now before the scientific world. The lectures are suited only to the more advanced student. One lecture a week throughout the year. One unit.

Laboratory Fees: For all laboratory courses a fee of five dollars each semester is charged.

CHEMISTRY

PROFESSOR NEAL.

The elementary courses in chemistry are complete in themselves and are of value to the general college student. They conform as well to the requirements of those who intend to pursue the study further and specialize in one of the many branches of applied chemistry. In the more advanced courses the work is modified to meet the needs of the individual student.

1a. **General Chemistry.** Recitations and lectures covering the principles of chemical theory and the practical applications.

Students are assigned to courses (1b) and (2) in the laboratory. Prerequisite: High School chemistry or Course 10. Three hours throughout the year.

1b. **General Chemistry.** Advanced laboratory exercises. Open only to those who have presented credits in High School chemistry. To be taken with course 1. Six hours (2 units) first semester.

2. **Qualitative Analysis.** This course includes the tests for the metals and acids and the systematic analyses of compounds whose composition is unknown to the student. Prerequisite course 1 or 10. Six or nine hours (2 or 3 units), either semester.

3. **Analytical Chemistry.** Lectures on Qualitative and Quantitative analytical methods. The theory on which the methods are based is given due consideration. One hour, throughout the year.

4. **Gravimetric Analysis.** Analysis of alloys, salts and the simpler rocks. Prerequisite, course 2. Twelve hours (4 units). To be taken with course 3, either semester.

5. **Volumetric Analysis.** Volumetric and water analysis. Titration with permanganate, silver, nitrate, iodine, acid and alkali. Prerequisite, course 4. Twelve hours, (4 units.) To be taken with course 3, either semester.

6. **Quantitative Analysis.** An introduction to the methods of both gravimetric and volumetric analysis. Prerequisite, course 2. Twelve hours (4 units), either semester.

7. **Advanced Analytical Chemistry.** The accurate calibration of weights and measures. The analysis of gas, foods, and complicated rocks. Prerequisite, courses 4 and 5, or course 6. Fifteen hours (5 units), throughout the year.

8. **Organic Chemistry.** This course is an introduction to the subject and as such is adapted to all students who have had course 1 or its equivalent. Course 8 is to be taken in connection. Course 8b may also be elected. Two hours, throughout the year.

8a. **Organic Preparations.** Typical organic compounds are built up from the hydrocarbons, and the relations of the various classes of the compounds of carbon are studied by chemical methods. Accompanies course 8. Nine hours (3 units), first semester.

8b. **Organic Preparations.** Type reactions for building up the carbon compounds from the elements and the transformation from one class of compounds to another. Some organic compounds will be analyzed by combustion and other methods. Accompanies course 8. Prerequisite, course 6 or its equivalent. Nine hours (3 units), second semester.

9. **Assaying.** This is a practical course in assaying gold, silver, copper and lead ore. Wet and dry methods are used. Prerequisites, Geology 1 and Chemistry 4 or 6. Nine hours (3 units), either semester.

10a. **General Chemistry.** An introduction to the subject for those who have not presented entrance credit in chemistry. Three hours a week, throughout the year.

10b. **General Chemistry.** Laboratory work for study and the verification of many of the statements of the class room. In the second semester a systematic study of the elements. This course is to be taken in connection with 10a. Six hours (2 units), throughout the year.

LABORATORY FEES

Courses 1b, 2 or 10b	\$10.00	each semester	
“ 4, 5, 6 and 8a.....	12.00	“	“
“ 7, 8b, and 9.....	15.00	“	“
Deposit fee.....	4.00	“	“

DRAWING

MISS BOOTH, MR. BROWN.

The courses in the department of Drawing are arranged for the following classes of students: first, students who intend to make art their major subject; second, students who are majoring in one of the Junior Engineering courses; third, students who intend to study architecture; fourth, students who have considerable ability in drawing and desire drawing as a culture subject. For an extended description of more advanced courses, see the special bulletin of the Conservatory of Art.

1. **Freehand Drawing.** Model and object drawing in pencil embracing the study of light and shade and perspective. Three hours throughout the year. One unit, each semester. Students must acquire a certain proficiency in drawing in order to receive credit for this course. Equivalent to Matriculation subject 33.

2. **Advanced Work in Freehand Drawing.** Drawing from casts (antique), full figure; drawing from life; historic ornament; design. Landscape sketching and exercise in composition. Six hours, throughout the year. Two units each semester. Prerequisite, course 1 or matriculation subject 33.

3. **Instrumental Drawing.** Instrumental Drawing, solving of geometrical problems, construction of mathematical curves, lettering. Three hours, throughout the year. One unit, each semester. Equivalent to matriculation subject 34.

4. **Advanced Work in Instrumental Drawing.** Instrumental perspective; drawing from model; applied design; composition. Three hours, throughout the year. One unit, each semester.

5. **Descriptive Geometry.** Fundamental problems on the point, the line and the plane; section and intersection. Six hours per week. Two units, first semester. Prerequisite, course 3, or matriculation subject 34.

6. **Descriptive Geometry.** Continuation of course 5. Shades and shadows, perspective and isometric projection. Six hours per week. Two units, second semester. Prerequisites, course 5.

FEES

Freehand Drawing, course 1	\$7.50	per semester
Instrumental Drawing, course 3 .	7.50	" "
Course 4	5.00	" "
Courses 5 and 6	5.00	" "
Course 2	7.50	" "

ECONOMICS AND SOCIOLOGY

ASSISTANT PROFESSOR BRIGGS.

The purpose of the department of Economics and Sociology is to impart to the student a knowledge of the principles that underlie the modern industrial and social organization. Special endeavor is made to train the student in correct habits of thinking in social and economic matters. Familiarity with library methods and the ability to make independent research along special lines are also insisted upon.

1. **Economics.** A general survey of the fundamental principles of economics. Three hours, both semesters.

2. **Economic Problems.** A continuation of course 1, dealing with some economic problems of current interest. Two hours, second semester.

3. **Sociology.** A study from the theoretical standpoint of the organization of society and the principles which govern the social relation of men. Three hours, first semester.

4. **Applied Sociology.** A critical examination of existing social problems. Course 3 is a prerequisite. Two hours, second semester.

EDUCATION

PROFESSOR HARRIS.

The department of Education offers courses in the theory and function of education, intended to introduce prospective teachers to the professional work of teaching, and to give general students the necessary information and thought training for intelligent participation in the solution of public and private educational problems. The work of the department is given largely from the cultural point of view and the broader educational problems of the present are studied in the light of history and psychology.

The State high school teachers' certificate is granted to students on the completion of one year of graduate study in one of the universities of the State. The work must include.

I. Graduation from a four year college course.

II. Professional knowledge, covering

(a) History of Education.

(b) Theory and Psychology of Education.

(c) Educational Methods.

(d) Practice teaching.

Divisions (c) and (d) must be pursued as graduate work; (a) and (b) may be pursued as junior or senior undergraduate courses: The department of Education of the College of the Pacific is recognized as fulfilling the requirements of (a) and (b).

It is recommended that students shall take before entering the department, or concurrently with the work, courses 1 and 2 and 3 in the department of History, course 3 in the department of Economics, courses 3 and 4 in the department of Philosophy, and course 1 in the department of Biology.

1. **Education in the United States.** An introductory course, dealing with the concrete problems in this country. Open to all students. Two hours, first semester.

2. **Introduction to Educational Theory.** This course seeks to acquaint the student with the fundamental problems of education and the method of their solution. Open to all students. Two hours, second semester.

3. **History of Education.** A detailed study of the rise and development of educational ideals and methods to the time of the Reformation. Lectures and discussions. Open to Sophomores. Three hours, first semester.

4. **History of Education.** A study of development of educational theories and systems from the Reformation to the present. Lectures and discussions. Open to Sophomores. Three hours, second semester.

5. **Characteristic Systems of Education.** A study of the theories of Comenius, Locke and Rousseau. Prerequisite, course 4. Two hours, first semester.

6. **Characteristic Systems of Education.** A continuation of course 4 with a study of Pestalozzi, Froebel, Herbart, and Spencer. Prerequisite, course 4. Two hours, second semester.

7. **Psychology of Childhood.** A critical study of the periods of development of infancy and childhood. Open to Juniors. Prerequisite, Philosophy 3. Three hours, first semester.

8. **Psychology of Youth.** A critical study of the adolescent period. Prerequisite, course 7 or its equivalent. Three hours, second semester.

9. **Social Aspects of Education.** A study of the social instincts of the child and of education as a factor in social control. Open to Juniors. Two hours, first semester.

10. **Moral and Religious Aspects of Education.** A study of the moral and religious instinct of childhood and their relation to all phases of development, together with a survey of existing means and methods of moral and religious instruction. Open to Juniors. Two hours, second semester.

11. **Philosophy of Education.** The meaning and aim of education, including a study of the physical and social conditions of education and their bearing upon the moral and religious life. Lectures and discussions. Open to Juniors. Prerequisites, courses 3 and 4 or 7 and 8, or Philosophy 3 or 4. Three hours, first semester.

12. **Research Work.** This course directs the student in library work and original investigation along some prescribed line. The work is largely individual. Open to Seniors, and to Juniors, by permission. One or two hours, both semesters.

ELOCUTION

(See under PUBLIC SPEAKING)

ENGLISH

PROFESSOR MARTIN, ASSISTANT PROFESSOR WINSLOW.

The courses in English are arranged with two main purposes in view; first, to develop in the student the ability to use the simple forms of prose easily and correctly; second, to give him such a knowledge of the movements, principles, and development of English Literature as will enable him to conduct his later reading intelligently.

Course 1 and either course 2 or an equivalent are prerequisite to all advanced courses in English unless otherwise specified. In all courses in English Literature the work of the student will be mainly reading of the author studied.

1. **Freshman Composition.** Three hours, throughout the year. Themes, lectures, and class discussion. First semester, narration and description; second semester, exposition. Required of all students.

2. **History of English Literature.** An historical outline, with considerable reading of masterpieces. Three hours, throughout the year.

3. **Advanced Narration.** Study of principles and the reading in class of themes written by members of the class. Not open to freshmen. Two hours, first semester.

4. **Argumentation.** The work is about equally divided between the study of the theory of argumentation and the writing of briefs. Three hours, second semester. Not given 1913-14.

5. **Tennyson.** Admission by permission. Three hours, second semester.

6. **Shakespeare.** Careful study of a few plays, reports on others. The study of Shakespeare as an artist, as a dramatist, and in relation to his contemporaries. Three hours, first semester or throughout the year.

7. **The English Romantic Movement.** Special study of Wordsworth, Byron, and Shelley, with briefer consideration of Scott, Keats, Coleridge, Lamb, and De Quincey. Introductory lectures on the Romantic Movement in the Eighteenth Century and occasional references to the movement in France and in Germany. Lectures, class discussion, and quiz on outside reading. Three hours, throughout the year.

8. **Victorian Literature.** The first semester is given up to the study of the poets: Tennyson, Browning, Arnold, and Swinburne; second semester; Ruskin, Carlyle, Arnold, Newman, and the novelists. Two hours, throughout the year.

9. **Dryden to Pope.** Lectures and quiz on outside reading. Dryden, Bunyan, Swift, Addison, the dramatists and essayists. Three hours, first semester.

10. **Pope to Wordsworth.** A continuation of course 9, but can be taken without it. Pope, the novelists, Goldsmith, Cowper, Crabbe, Johnson. The rise of romanticism. Three hours, second semester.

11. **Chaucer.** The Canterbury Tales. Two hours, first semester.

14. **English Literature Seminar.** May be repeated as the work will vary from year to year. Admission by permission. Two hours, throughout the year.

16. **English Grammar.** Some attention will be paid to historical grammar and the growth of the language. Demands some knowledge of at least one modern language. Open to all students who have had or are taking English 1 and have sufficient training in language work. Three hours, first semester.

17. **American Literature.** The history and development of American literature up to the present day. There will be considerable outside reading. Open to first year students. Three hours, first semester.

18. **Old English.** Old English Grammar and translation of prose selections. Not open to first year students. Two hours, first semester.

19. **Beowulf.** Open to students who have completed English 18. Three hours, second semester.

20. **English Bible.** Studied as literature. Consideration is given to style and literary types, and to the history of the English versions. Three hours, second semester.

21. **History of the Drama to Shakespeare.** Not open to first year students. Three hours, second semester in 1913-14.

FRENCH

PROFESSOR BRUN.

French being a living language instruction will be given with a view to treating it as such. At the end of the full course the student should be able to read and speak the language with ease and follow lectures in French.

1. **Elementary French.** Fraser & Squair's French Grammar and Reader. Exercises in French conversation and composition. Labiche, *Le voyage de monsieur Perichon*. Aldrich and Foster French Reader. Four hours, both semesters.

2. **Prose Composition.** Translation into French of selected English Prose. French Conversation. Two hours, both semesters.

3. **Modern French.** Balzac, *Le cure de Tours*; Daudet, *Tartarin de Tarascon*; Hugo, *Hernani*; Loti, *Pecheur d'Islande*. This course will be conducted in French. Two hours, both semesters.

4. **French Conversation.** Two hours, both semesters. Courses 2, 3, 4 are open to students who have completed course 1.

5. **Advanced French Composition.** Translation into French of English Prose and practice in putting one's thoughts into written French. Open to students who have completed course 2.

6. **Classical French.** Selections from authors of the classical period. Corneille, Racine, Molière, Boileau, La Fontaine, etc. Lectures in French. Open to students who have completed courses 2 and 3. Two hours, both semesters.

7. **History of French Literature.** Open to students who have completed courses 1 to 6 inclusive. Two hours, both semesters.

GEOLOGY

PROFESSOR NEAL.

The courses offered will prove a benefit to the general student, as well as a good introduction for those intending to specialize in some branch of Geology. Many places of interest are readily accessible and field trips wherever mentioned are required. The museum is well stocked with material for study.

1a. **Physiographic Geology.** A first course. Should be preceded by elementary physiography. Observation and study of structures and processes at first hand is considered necessary for best results, hence a requirement of attendance on at least three field trips of one day each. To be taken in connection with course 1b. To be followed by course 2 or 4a. In alternate years with 3a. Two hours, first semester.

1b. **Physiographic Geology.** Laboratory exercises. Accompanies courses 1a and 3a. Comprises a study of land forms from contour maps, models, and field observation. Three hours (1 credit), first semester.

2. **Historic Geology.** Prerequisite course 1a and Biology 1. Three hours, second semester.

3a. **Physiography.** Advanced course. To be taken with course 1b. Attendance on three field trips is required. Prerequisite, Elementary Physiography or Geology 1 and Elementary Physics. Two hours, first semester.

4a. **Economic Geology.** Considers geologic materials of economic value, both metallic and non-metallic. Attendance on two field trips is required. Prerequisite, courses 1a or 3a. To be taken with course 4b. Two hours, second semester.

4b. **Economic Geology.** Laboratory exercises. Study of the economic minerals and rocks with regard to origin, distribution, properties, and uses. Three hours (1 credit), second semester.

5a. **Mineralogy.** A study of the native elements and minerals. Prerequisites, course 1a or 3a, and Chemistry 2. To be taken with course 5 b. One hour, throughout the year.

5b. **Mineralogy.** Laboratory study to accompany course 5a. Six hours (2 credits), throughout the year.

LABORATORY FEES

Course 1b and 2 b-----	\$3.00	each semester
Course 4b-----	5.00	“ “
Course 5b-----	4.00	“ “

GERMAN

MR. BREWER, MISS BARR.

A thorough reading knowledge of the German language is the first aim of the German department. Conversation is used to enliven the class exercises and to lay the foundation for a speaking knowledge of the language.

The pronunciation taught is that of the stage which has been recommended for school use by the German National Convention of teachers and philologists.

1. **Elementary German.** The course is designed to furnish the student with the elements of the German language such as is necessary for a personal command of simple German and a thorough drill in the elements of German Grammar. Five hours, both semesters.

2. **Second Year German.** (a) Reading of modern German texts. Three hours, both semesters.

(b) **German Composition.** This course is intended to assist the student in acquiring both a written and spoken command of German; and with it a thorough review of German Grammar. This course will be conducted in German. Two hours, both semesters.

Course 1 and 2 (a and b) or an equivalent are prerequisite to all advanced courses in the German Department. 2a and 2b should if possible be taken in the same year.

3. **Classical German Drama.** Reading and discussion of the most important plays of Lessing, Schiller and Goethe. Three hours, both semesters.

4. **Modern German Drama.** The rapid reading of dramas of the latter 19th century, especially those of Hauptmann and Sudermann, with lectures on their nature and development. Three hours, both semesters. (Not given in 1913-1914.)

5. **Advanced German Composition.** The writing of connected German discourse. This course will be conducted in German. Two hours, both semesters.

6. **History of German Literature.** An outline course. Lectures and assigned readings. Two hours, both semesters. (3 units credit). Ability to read German texts with facility is expected of students registering for course 6. (Not given in 1913-1914.)

7. **Modern German Novels.** Reading and discussion. This course aims to develop the student's ability to read in the original. Two hours, both semesters.

8. **Goethe's Faust.** Part First and Part Second. Three hours, both semesters.

9. **The Poems of Goethe and Schiller.** Prerequisite, course 3. Two hours, second semester.

GRAPHIC ARTS

MISS BOOTH.

The work in this department has been arranged to meet the needs of three classes of students; first, those who desire to study art for its culture value; second, those who wish to begin professional art study while pursuing a college course; third, those who desire training in graphic expression for its practical use. For students who wish to make Graphic Arts their major study, a

scheme of courses is provided for which credit of twenty-four units is given.

As a part of the requirements for the bachelor's degree, these courses may be taken in the order in which they are arranged, or, after the Sophomore year, students may give more attention to any one particular subject which seems best fitted to their purposes, omitting some of the others.

These courses must be supplemented by the required lectures and readings on the history and theory of art and by not less than four extra hours of practice work arranged for by the instructor.

Students may also study art as a minor subject, receiving sixteen units of credit.

1 and 2. Elementary still life; drawing from the cast; geometrical drawing. Six hours a week throughout the Freshman year.

3. Continuation of drawing from the cast; still life in charcoal and colored chalk (or pen and ink); landscape (out-door work); elementary designs. Sophomore year, six hours a week, first semester.

4. Scientific perspective (problems involving the mathematical principles of perspective); drawing from the cast, full length figure; elementary design and composition. Sophomore year, six hours a week, second semester.

5. Continuation of full length figure from the cast; head from life in charcoal or pen and ink; landscape (out-door work) in charcoal, wash or pen and ink; applied design. Junior year, six hours a week, first semester.

6. Drawing from life (head and draped figure); composition still life in oil or water colors; applied design. Junior year, six hours a week, second semester.

9. Landscape in color (out-door work); still life in oil; head from life in oil, water color or pastel. Senior year, six hours a week, first semester.

8. Continuation of landscape in color; color composition; head from life in color or advanced work with the pen and ink and brush for illustration. Senior year, six hours a week, second semester.

A fee of \$25.00 per semester will be charged for these courses.

GREEK

PROFESSOR STEPHENSON.

Courses are offered: first, for students who desire a first hand literary acquaintance with some of the Greek masterpieces; second, for students who intend to specialize; third, for prospective ministers.

1. **Elementary Greek.** For college students who have never studied Greek, but who desire quickly and thoroughly to prepare themselves for courses in college Greek. A completion of this work admits to course 2. Four hours, both semesters.

2. **Epic Poetry.** Homer's *Iliad* (Selections). A critical and literary study with discussions and the assignment of papers and reports on Homeric topics. Three hours, first semester.

3. **History and Oratory.** Selections from Herodotus and Lysias. A study of the development of historical writing and oratory among the Greeks. The facts of the Persian War and their influence upon subsequent Greek achievement are emphasized. Three hours, second semester.

4. **Greek Prose Compositions and Sight-Reading.** Required of Greek major students and prospective teachers in connection with courses 2 and 3. Two hours, both semesters.

5. **Tragedy.** Prometheus of Æschylus and Œdipus the King of Sophocles. A study of the origin and development of drama. Three hours, first semester.

6. **An Introduction to Greek Philosophy.** Xenophon's *Memorabilia* and Plato's *Apology* and *Crito*. Three hours, second semester.

7. **Tragedy and Comedy.** The *Antigone* of Sophocles, the *Iphigenia Taurica* of Euripides and a play of Aristophanes. Greek literature outlined. Three hours, first semester.

8. **Selections from Lyric Poetry.** Attention given to Latin and English poems influenced by these models. Three hours, second semester.

9. **Oratory.** Demosthenes and Æschines. A detailed comparison is made with Burke's *Nabob* of Arcot's Debts and Webster's Reply to Hayne. Three hours, first semester.

10. **Homer's Odyssey.** A rapid reading of the whole poem. A comprehensive study of the Epic. The *Iliad* and *Odyssey* compared and contrasted with the Epics of other nations. Two hours, both semesters.

11. **New Testament Greek.** One of the Gospels and the first epistle to the Corinthians interpreted. Collateral reading in the Septuagint. A brief study of the transmission of the text. Two hours, both semesters.

12. **Topography of Athens; Athenian Life and Customs.** Lectures, illustrations and reports. One hour, second semester.

13. **The Fine Arts Among the Greeks.** A brief survey of their architecture, sculpture and painting. One hour, first semester.

14. **Seminar.** For advanced students and prospective teachers. Plato's *Phædo* and *Republic* with collateral reading in Aristotle's *Politics*. Attention given to Greek palæography. Two hours, both semesters.

HISTORY AND POLITICAL SCIENCE

PROFESSOR KLINE.

The underlying purpose of all the work in History is to give the student the historical point of view, to develop an appreciation of the great movements which have influenced mankind, and to lead to a better understanding of the present when it is viewed as a product of the past. As a rule the courses will be a combination of lectures, text-book work and collateral reading and will be conducted in an informal manner, freedom of discussion being encouraged. While individual reports, map drawing, and note taking are required, they are regarded as a means and not as an end.

I. European History

1. **Medieval History.** An introductory course covering the period from the fall of the Roman Empire to the close of the Reformation. Special emphasis on the historical method, library work, and note taking. Three hours, both semesters.

2. **Europe in the Seventeenth and Eighteenth Centuries.** A considerable time will be given to the period of the ancient regime, the French Revolutions, and Napoleon. Two hours first, semester.

3. **Nineteenth Century Europe.** A continuation of course 2. Special emphasis on the formative influences of the Nineteenth Century and the present problems of European politics. Two hours, second semester.

4. **The History of England.** The course will cover the period from the Norman conquest to the accession of Queen Victoria. Considerable attention will be given to political and constitutional development. Two hours, both semesters.

5. **World Politics.** A lecture course dealing with the more important contemporary movements of world-wide importance, such as colonization, the industrial revolution, the struggle for markets, the growth of international comity, the political and economical awakening of backward countries, the partition of Africa, and the struggle for Asia. One hour, second semester.

6. **History of the Christian Church.** An outline course dealing with the development of the Christian church and its influence on western civilization. Two hours, first semester.

II. American History

7. **Colonial History.** The transplanting of European civilization to America, the struggle between the leading powers for supremacy, the institutional development of the colonies, and the growing independence from England. Two hours, second semester.

8. **Constitutional and Political History of the U. S. 1775-1815.** The subjects treated will be the causes of the revolution, the formation of state governments, the Articles of Confederation, the making of the constitution, the rise of political parties, and early constitutional interpretation. Three hours, first semester.

9. **Constitutional and Political History of the U. S. 1815-1865.** A continuation of course 8 dealing with the slavery issue, the struggle between nationalism and states' rights, and secession. Three hours, first semester.

10. **Social and Economic Evolution of the U. S. Since 1865.** Lectures, papers and assigned readings. The course will deal with the more important national problems since the time of the civil war, including the reconstruction of the southern states, the disappearance of the frontier, the development of transportation, the rise of trusts, the agrarian movement, the transformation of the United States into a world power, and the development of a new political consciousness. Two hours, second semester.

11. **Seminar in History.** An intensive study of a limited period with special emphasis on historical method, the handling of source material, the use of bibliography, and the critical estimate of secondary authorities. Admission by permission. Credit to be arranged.

III. Political Science

13. **American Government and Politics.** A study of the organization and practical working of the federal government, the constitution as interpreted by judicial decisions, the relation of states to the national government, and the development of political parties. Some attention will also be given to local and municipal government. Two hours, second semester.

14. **Constitutional Law.** A study of the constitution of the United States as interpreted by judicial decisions. Lectures, text-book, and a study of the leading cases. Prerequisite, course 13. Three hours, second semester.

15. **Elements of Political Science.** A study of the origin and development of political institutions. The leading theories of the State which have prevailed at different periods will be examined and some attention will be given to recent developments of political thought. Three hours, first semester.

16. **Comparative Government.** A comparative study of the governments of the leading European countries and the United States. Three hours, second semester.

LATIN

PROFESSOR STEPHENSON, MISS LUMMIS.

Courses are offered, first, for students who desire a first hand literary acquaintance with Latin writers; second, for students who intend to specialize.

1. **Rush Latin.** This course is intended for those who have completed only two years of Latin in preparatory schools. It gives a thorough preparation for course 2. Cicero and Virgil are the authors read. Three hours, both semesters.

2. **Cicero; Selections from Catullus; Propertius, Tibullus and Ovid; Terence.** A review of grammar, moods and tenses, particles. A study of the word and clause order in the Latin sentence. Each author is also studied as a literary master. Three hours, both semesters.

3. **Latin Prose Compositions and Sight Reading.** Required of Latin major students in connection with course 1. Two hours, both semesters.
4. **Odes and Epodes of Horace.** A critical and literary study of the poet, his age and influence on subsequent literature. Roman literature outlined. Three hours, first semester.
5. **Latin Comedy.** Plautus and Terence. A study of the development of the Latin drama, and a careful examination of the early forms and constructions of the *sermo familiaris*. Three hours, second semester.
6. **History of the Republic.** Livy (selections). Outline of the expansion of Rome till 146 B. C. To be taken in connection with courses 3 and 4. Two hours, both semesters.
7. **History of the Empire.** The Annals of Tacitus and Letters of Pliny the younger. Two hours, both semesters.
8. **Satires and Epigrams.** Satires of Horace and Juvenal; epigrams of Martial. A study of the private life of the Romans. Three hours, one semester.
9. **Virgil.** The Georgics and Eclogues with portions of the *Æneid*. A literary study. Attention given to the Greek models and to imitations in English. Three hours, one semester.
10. **Cicero, Lucretius and Seneca.** The philosophical systems of Rome outlined. Two hours, both semesters.
11. **Advanced Prose Compositions.** Prerequisite, course 2. One hour, both semesters.
12. **Virgil's *Aeneid*.** Books VI-XII. A comprehensive study of epic poetry. Three hours, one semester.
13. **Ancient Literary Criticism.** Cicero, Horace and Quintilian. Two hours, both semesters.
14. **Cicero's Life and Times.** Cicero's letters and select essays. Two or three hours, one semester.
15. **Roman Topography, Life and Customs.** Lectures, illustrations and reports. One hour, first semester.
16. **The Fine Arts Among the Romans.** A brief survey of their architecture, sculpture and painting. One hour, second semester.
17. **Seminar.** For advanced students and those who expect to teach. A course in Roman comedy; select plays of Plautus and Terence. Private reading in the *Cena Trimalchionis* of Petronius. Portions of Terence adapted to the standards of classical prose. A few weeks devoted to Latin palæography. Two hours, both semesters.

MATHEMATICS

PROFESSOR COOK, PROFESSOR BRIGGS, MR. BROWN.

The courses in this department are arranged for students who pursue Mathematics for its culture value; students who major in Mathematics; students who pursue Mathematics as prerequisite for scientific courses; and students who are taking a junior course in engineering.

Course 1 is required of all students who will offer Mathematics as a major or minor subject, students in Junior Engineering, and students in general science. Those who offer Trigonometry for entrance may omit Trigonometry in this course. Being a course introductory to pure and applied Mathematics, it is open to all students. Course 6 is required and courses 7, 8, 10, 13, and 14 are recommended to all students who major in Mathematics, while courses 6 and 11 are required of students in the Junior Engineering courses.

Students taking Mathematics for its culture value should co-ordinate Mathematics 1 or 2 and 3 and 10 with Astronomy 1.

1. **Elements of Mathematics.** A course co-ordinating Algebra, Trigonometry, and Analytical Geometry, with a brief introduction to Calculus. Introductory to all future work in Mathematics. Five hours, both semesters.

2. **Algebra.** Algebraic theory, quadratic equations, curve tracing, exponentials and logarithms; binomial theorem for any index; theory of equation and other selected topics. Three hours, one semester. (Not given in 1913-14.)

3. **Plane Trigonometry.** Fundamental principles, development of general formulæ and the application of trigonometry to the solution of triangles and mensuration in general and the accurate solution of triangles by logarithms. Three hours, second semester.

4. **Solid and Spherical Geometry.** The fundamental proposition of the geometry of space according to Euclid. Two hours, first semester.

5. **Spherical Trigonometry.** The deduction of the fundamental formulæ of the trigonometry of space, with practice in the solution of spherical triangles by logarithm, and the application of trigonometry to surveying, geodesy, and astronomy. Two hours, first semester. Prerequisite, plane trigonometry.

6. **Calculus—Differential and Integral.** Differentiation of algebraic and transcendental functions of a single variable; infinitesimals and differentials; differentiation of function of two variables, with application to the determination of areas, volumes, moments of inertia and to mechanics. Three hours, both semesters. Prerequisite, course 1.

7. **Advanced Calculus.** Continuation of course 6. Partial differentiation, double and triple integration, definite integrals with applications to the geometry of space and Taylor's theorem for functions of several variables. Three hours, first semester. Prerequisite, course 6.

8. **Theory of Equations.** A general course in algebraic theory, including the theory of determinants and the theory of equation. Transformation of equation and solution of numerical equations. Three hours, second semester. Prerequisite, course 1.

9. **Differential Equations.** Ordinary and partial differential equations. Homogenous equations of the first order, solution by differentiation, equations of the second order. Formulæ for reduction, standard linear forms. Riccati's equation, Legendre's equation, etc. Three hours, both semesters. Prerequisite, courses 6, 7 and 8.

10. **History of Mathematics.** A general culture course in the development and progress of the more recent mathematical theories. Open to all students who have taken at least two years work in Mathematics. Two hours, first semester.

11. **Plane Surveying.** Theory of surveying, modern surveying instruments, practice with the surveyors' compass, transit, level, and plane table. Recitation and field work. Three hours, both semesters. Prerequisite, course 2.

12. **Teachers' Course.** A rapid review of algebra through equation; methods of teaching algebra; a critical study of the leading books on the elements of algebra. A study of Euclid; methods of teaching geometry; a critical study of leading textbooks on Plane Geometry. Practice in teaching both algebra and Geometry. Two hours, second semester. Prerequisite, courses 1, 2, 3, 6 and 10.

13. **Advanced Analytical Geometry.** A continuation of course 1. Three hours, both semesters.

14. **Theory of Function.** Elementary course. Three hours, either semester.

15. **Co-ordinate Geometry of Three Dimensions.** Two hours, one or two semesters.

MUSIC

DEAN OF THE CONSERVATORY and ASSISTANTS.

In accord with leading institutions of learning music is recognized as a part of the College curriculum. Credit is given by units. The number of hours necessary to constitute a unit is based on the requirements of the Conservatory of Music.

The work required in the course leading to the degree of Bachelor of Music is identical with that of the courses leading to the degree of Bachelor of Arts, save that forty units in applied music and harmony will be necessary for graduation.

1. **History of Music, Notation, Sight Reading, and Dictation.** An outline history of the development of the musical art, including at least the following: the form of the Greek scales; church music from the time of Gregory; the Netherland School of Polyphony; the opera and oratorio; together with the biographical sketches of Palestrina, Bach, Handel, Hayden, Mozart, Beethoven, Chopin, and Wagner. The ability to read and perform easy chorals and accompaniments at sight upon the piano. Reasonable proficiency in sight-reading is required; also the ability to write in musical notation any simple melody when played or sung, (three units.)

2. **Elements of Harmony and Composition.** Notation; formation of diatonic and chromatic scales in major and minor modes; consonant and dissonant intervals and their inversions; triads and their inversions in major and minor modes; chords of the dominant seventh and ninth and their inversions; resolution of the dominant seventh; progressions of the secondary chords of the seventh; a study of chord connection and voice-leading from a given bass; modulation and transportation; the harmonizing of simple melodies; suspensions, retardations and embellishments and their use in the constructions of melodies over a given bass; the analysis of standard compositions, (three units.)

3. **Musical Technique and Interpretation.** As musical technique has for its only justification the intelligent interpretation of the composer's ideas, interpretation will be strongly emphasized in this course.

The ability to perform, with satisfactory technique and intelligent interpretation, on either the pianoforte, pipe organ or violin, or to sing, with satisfactorily placed and developed voice, compositions such as the following;

(a) Pianoforte: One of the easy fugues by Bach; a sonata by Beethoven (Opus 13, *Pathétique*); *Aufschwung*; Opus 12, by Schumann; *Prelude No. 15*, by Chopin.

(b) Pipe Organ: *Prelude Fugue* by Bach, *Sonata* by Mendelssohn and a modern composition from works of Widor, Guilmant and Saint Saens.

(c) Violin: A sonata by Mozart, with piano; *Romance* by Svendsen; and a modern composition.

(d) Voice: Songs by Mozart, Schubert, Schumann, Brahms, Franz, MacDowell, or another American composer.

In lieu of the above requirements, exceptional skill in technique and interpretation with any one of the orchestral stringed or wind instruments may be accepted; (three units.)

PHILOSOPHY

PROFESSOR MORRIS.

The courses in Philosophy are adapted to the following students: first, those who desire to supplement their work in other fields with a general insight into the problems of philosophy; second, those who are looking forward to practical work in teaching, in social service, or in the ministry; third, those who find themselves personally interested in the fundamental problems of thought and who desire to form constructive views of their own concerning such problems.

1. **Introduction to Philosophy.** This course treats of the nature of philosophy, its bearing on practical life, on scientific investigations, on aesthetic judgments, and on religious conceptions, and considers the prevalent systems of philosophy with emphasis on their characteristic attempts to solve its problems. Lectures, discussions, text-book, brief papers. Open to first year students by permission. Two hours, both semesters.

2. **Logic.** An elementary course in the study of terms, of judgments, of deductive and inductive methods of reasoning, with special emphasis on the practical application of logic. Lectures, text-books, written exercises. Three hours, first semester.

3. **Psychology.** A study of the facts of consciousness, their classification and analysis, their physical correlates, and the methods, advantages and limitations of experimental psychology. Lectures, text-book, experiments. Three hours, second semester.

4. **Introduction to Ethics.** A study of the fundamental conception of morality. Among the subjects treated will be the following: the nature and method of ethics; the grounds of moral obligation; the relation of pleasure to moral conduct; the function and authority of conscience; ethical ideals. Text-book, lectures, collateral reading, and reports. Not open to first year students. Three hours, first semester.

5. **History of Philosophy.** A study, in outline, of philosophy from its rise among the Greeks to the present. Lectures, text-book, select readings from philosophers studied, and brief papers. Not open to first year students. Three hours, both semesters.

6. **Theory of Knowledge.** This course offers a critical study of the leading theories of knowledge, aiming at a constructive result. Prerequisites, courses 2, 3 and 5. Two hours, both semesters.

7. **Metaphysics.** This course seeks consistent theories of both physical and mental being directing special attention to the relation between knowledge and reality. Prerequisite, course 6. Three hours, second semester.

8. **Theism.** In this course a critical study of the historical arguments for theism will be made with special emphasis on the relation between the theistic conception of the world and "the fundamental postulates of our total life." Prerequisite, course 6. Three hours, second semester.

9. **Practical Ethics.** In this course the contemporary problems of individual and social life will be studied in the light of ethical theory. Lectures, assigned reading, reports. Prerequisite, Philosophy 4. Three hours, second semester.

10. **Aesthetics.** The aim of this course is to study the nature of the beautiful, to point out its significance for life, and to discuss the relation between aesthetical values and ethical and religious values. Text-book, lectures and reports. Three hours, first semester.

11. **History and Significance of the Theory of Evolution.** This course deals with the history of the theory of evolution from the Greeks to the present, its significance as a philosophical conception, and its bearings on ethical and religious ideals. Three hours, second semester.

12. **Present-day Tendencies in Philosophy.** A critical estimate of Naturalism, Realism, Pragmatism and Personal Idealism. Lectures, assigned reading and papers. Three hours, second semester.

13. **Seminar in Philosophy.** Subject for the year: Psychology of Religion. Two hours, both semesters.

PHYSICS

PROFESSOR COOK.

The courses in Physics are arranged for students who will pursue science for its culture value, students who major in Physics, students who take Physics as prerequisite to other scientific courses, and students who are taking the junior course in engineering. Course 1 is required of all students in the junior engineering courses.

1a. **General Descriptive Physics.** Lectures with experimental illustrations and recitations, comprising the fundamental principles of mechanics, sound, heat, light, electricity and magnetism. Three hours, both semesters. Prerequisite, Mathematics 2.

1b. **Experimental Physics.** A laboratory course covering the subjects in course 1a. Six hours, (two units), both semesters.

2a. **Electrical Theory.** Lectures and recitations. The fundamental principles of the theory of electricity, direct and alternating currents, electrical machinery, and the transmission of electricity of low and high potentials. Two hours, both semesters. Prerequisite, course 1.

2b. **Electrical Measurements.** A laboratory course giving practice in the use of the various types of galvanometers, voltmeters, ammeters and dynamometers. Three hours, both semesters or six hours one semester (two units). Prerequisite, course 1.

3. **Theory of Light.** The wave theory and the principles of refraction, diffraction, interference and polarization, trans-

mission, absorption and analysis of light. Lectures with experimental illustrations and recitations. Three hours, first semester. Prerequisite, course 1.

4. **Theory of Heat.** Dynamic theory of heat, conduction, radiation and absorption of heat energy, and the laws of thermodynamics. Application of heat to the transformations of matter and the measurements of heat constants. Lectures and recitations. Three hours, second semester. Prerequisite, course 1..

5. **Theory of Sound.** Dynamical theory of sound refractions. Lectures and recitations. Three hours, each semester. Prerequisite, course 1.

6. **Theoretical Mechanics.** The fundamental principles of statics, dynamics and kinetics. Three hours, both semesters. Prerequisite course 1 and Mathematics 6 or, by special permission, this course may accompany Mathematics 6.

LABORATORY FEES

Course 1b-----	\$5.00	per semester
Course 2b-----	5.00	“ “
Deposit 1b or 2b-----	5.00	“ “

PUBLIC SPEAKING

MISS MACOMBER.

The course in public speaking is intended to develop the student more particularly in the use of voice and as far as possible enable him to be natural and effective in ordinary conversation as well as in public speaking. A fee of \$10.00 a semester is charged for each course.

Attention is also called to the course in Narration and Description and the course in Argumentation given by the English department.

1. **Voice Cultivation.** Exercises in vocal culture, breathing, position, and technique of gesture: pronunciation and emphasis, elements of quality and force, with their application, delivery of short extracts from masterpieces of oratory. Once a week, both semesters.

2. **Public Speaking.** Studies in public speaking and the delivery of short original speeches. Topics are selected from

history, politics, current events, and in speeches prepared for various occasions. The aim of this course is to give as much practice in self-expression as possible. One hour a week, both semesters.

3. **Dramatic Interpretation.** Interpretive study, training in speech and action, and practice in oral reading and in platform recitation. Standard plays and other readings in prose and poetry. Vocal training one hour a week, both semesters.

4. **Course for Professional Training.** Qualified students who are planning to become teachers of public speaking or who are preparing for professional platform work will have opportunity for special individual training.

SPANISH

PROFESSOR BRUN.

In the study of this language stress is laid upon the acquisition of a correct pronunciation and of a thorough knowledge of reading, attention being paid to syntax and, as far as possible, to conversation.

1. **Elementary Spanish.** Giese, *A First Spanish Book and Reader*; Matzke, *First Spanish Readings*; Alarcon, *Novelas, Cortas Escogidas*. A continuous course open to all. Three hours, both semesters.

2. **Modern Spanish Syntax.** Ramsey, *A Text-book of Modern Spanish*; Umphrey, *Spanish, Prose Composition*. Open to students who have completed course 1, or who have received credit for entrance subject 15. Two hours, both semesters.

3. **Modern Spanish Reading.** Translation of selected texts in prose and verse. Open to students who have completed course 2 or who have received credit for entrance subject 15. Two hours, both semesters.

4. **Advanced Spanish Composition.** Translation into Spanish of selected English prose. Open to students who have completed courses 2 and 3, or their equivalent. Two hours, both semesters.

5. **Classical Spanish.** Reading from authors such as Calderon, Cervantes, Lope de Vega. Open to students who have completed courses 2 and 3. Two hours, both semesters.

Junior Courses in Engineering

Since the first two years of the regular four year course in engineering, and the first three years of the five year course recently introduced into several of the best universities, comprise courses regularly given in a College of Liberal Arts, junior courses in Civil, Mechanical, Electrical, Mining and Chemical engineering are offered in the College of the Pacific.

A junior certificate will be granted at the completion of the junior course in engineering. These certificates will give junior standing in Leland Stanford Junior University, the University of California, or any University or Technical school in the East. Those taking the three year course will, if they so desire, be granted the Bachelor of Science degree from the College of the Pacific on completion of the five years course in any accredited university.

The following schedule will indicate the scope of the work given in the junior courses.

Schedule for Two-year Junior Courses in Engineering

Civil Engineering

FIRST YEAR	1st Sem.	2nd Sem.	SECOND YEAR	1st Sem.	2nd Sem.
Mathematics 1 & 3	3	3	Mathematics 6	3	3
English 1	3	3	Physics 1	5	5
Chemistry 1	5	5	Physics 6	3	3
Mathematics 11	3	3	Astronomy 2	3	3
Physical Culture	1	1	or		
Drawing 3	1	1	Geology 1 and 4, or	3	3
			Mineralogy 1		
			Physical Culture	1	1
			Drawing 5 & 6	2	2
	16	16		17	17

Mechanical Engineering

Mathematics 1 & 3	3	3	Mathematics 6	3	3
English 1	3	3	Physics 1	5	5
Chemistry 1	5	5	Physics 6	3	3
Mathematics 11	3	3	Physics 2	3	3
Physical Culture	1	1	or		
Drawing 3	1	1	Geology 1 and 4, or	3	3
			Mineralogy 1		
			Physical Culture	1	1
			Drawing 5 & 6	2	2
	16	16		17	17

Electrical Engineering

Mathematics 1 & 3	3	3	Mathematics 6	3	3
English	3	3	Mathematics 11	3	3
Chemistry	5	5	Physics 2	3	3
Physics 1	5	5	Physics 6	3	3
Physical Culture	1	1	Physical Culture	1	1
Drawing 3	1	1	Drawing 5 & 6	2	2
	18	18		15	15

Mining Engineering

Chemistry	5	5	Chemistry	5	5
Mathematics 1 & 3	3	3	Mathematics 6	4	4
English 1	3	3	Physics 1	5	5
Geology	3	3	Mineralogy	3	3
Drawing	1	1	Physical Culture	1	1
Mathematics 11	3	3	Drawing 3	1	1
Physical Culture	1	1			
	19	19		19	19

Schedule for Three-year Junior Courses in Engineering

Civil Engineering

FIRST YEAR	1st Sem.	2nd Sem.	SECOND YEAR	1st Sem.	2nd Sem.	THIRD YEAR	1st Sem.	2nd Sem.
Math. 1 & 3 . . .	3	3	Math. 6	3	3	Physics 6 . . .	3	3
English 1	3	3	Physics 1	5	5	Geology or		
Chemistry 1 . . .	5	5	German or			Mineralogy . .	4	4
German or			French	4	4	Electives . . .	11	11
French	4	4	Mathematics 11	3	3			
Physical Culture 1	1	1	Mechanical					
Drawing 3	1	1	Drawing 5 & 6	2	2			
	17	17	Phys. Culture . .	1	1			
				18	18		18	18

Mechanical Engineering

Math. 1 & 3 . . .	3	3	Math. 6	3	3	Physics 6 . . .	3	3
English 1	3	3	Physics 1	5	5	Elective	15	15
Chemistry	5	5	Mathematics 11	3	3			
German or			German					
French	4	4	or French . . .	4	4			
Drawing 3	1	1	Drawing 5 & 6 .	2	2			
Phys. Culture . .	1	1	Physical Cult. .	1	1			
	17	17		18	18		18	18

Electrical Engineering

Math. 1 & 3 . . .	3	3	Math. 6	3	3	Physics 6 . . .	3	3
English 1	3	3	Physics	5	5	Physics 2 . . .	3	3
Chemistry 1 . . .	5	5	Mathematics 11	3	3	Elective	11	11
German or			German or					
French	4	4	French	4	4			
Drawing	1	1	Drawing 5 & 6 .	2	2			
Physical Culture 1	1	1	Phys. Culture . .	1	1			
	17	17		18	18		18	18

Mining Engineering.

Chemistry	5	5	Chemistry	5	5	Geol. 1 & 4 . . .	3	3
Math. 1 & 3 . . .	3	3	Math. 6	3	3	Mineralogy . .	3	3
English 1	2	2	Physics 1	5	5	Physics 6 . . .	5	5
Ger. or French . .	4	4	Ger. or French .	4	4	Math. 11 . . .	3	3
Drawing 3	2	2	Phys. Cult. . . .	1	1	Math. 12 . . .	2	2
Phys. Cult. . . .	1	1				Elective	3	3
	17	17		18	18		19	19

Chemical Engineering.

Chemistry	5	5	Chemistry	5	5	Chemistry 7 . .	5	5
Math. 1 & 3 . . .	3	3	Math. 6	3	3	Chemistry 8 . .	5	5
English 1	3	3	Physics 1	5	5	Mineralogy . .	3	3
Ger. or French . .	4	4	Ger. or French .	4	4	Electives . . .	6	6
Geology	3	3	Phys. Cult. . . .	1	1			
Phys. Cult. . . .	1	1						
	19	19		18	18		19	19

STUDENT ORGANIZATIONS

A. LITERARY SOCIETIES.

1. Archania.

Organized April 1, 1854.

Fall Semester, 1912.

George H. Colliver	President
E. O. Talbott	Vice President
Peter G. Ruef	Secretary
Allison E. Gable	Corresponding Secretary
Roy E. Learned	Treasurer

Spring Semester, 1913.

George H. Colliver	President
A. E. Clark	Vice President
Charles E. Winter	Secretary
Peter G. Ruef	Corresponding Secretary
Allison E. Gable	Treasurer
Charles W. Everett	Sergeant-at-Arms

2. Rhizomia.

Organized November 8, 1858.

Fall Semester, 1912.

C. L. Andrus	President
Z. R. Rideout	Vice President
Herman S. Brueck	Treasurer
Oliver E. Irons	Recording Secretary
F. E. Turton	Corresponding Secretary
Charles C. Sheldon	Attorney

Spring Semester, 1913.

Z. R. Rideout	President
Carol K. King	Vice President
Eric C. Brandstad	Treasurer
Wesley R. Whitaker	Recording Secretary
Ray Shafer	Corresponding Secretary
Carlton Andrus	Attorney

3. Emendia.

Organized November 12, 1858.

Fall Semester, 1912.

Mattie Gingrich	President
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Anna von Glahn.....	Vice President
Avyette Richardson.....	Secretary
Jessie Wood.....	Treasurer
Clara Clark.....	Chaplain
Edna Hannibal.....	Sergeant-at-Arms

Spring Semester, 1913.

Amy Haskett.....	President
Avyette Richardson.....	Vice President
Anna von Glahn.....	Secretary
Lilabeth Marriott.....	Treasurer
Edna Hannibal.....	Chaplain
Felice Pyers.....	Sergeant-at-Arms

4. Sopholechia.

Organized November 14, 1881.

Fall Semester, 1912.

Mary Gray.....	President
Myrtle Shafer.....	Vice President
Ethel Rodda.....	Recording Secretary
Evelyn Provis.....	Corresponding Secretary
Maud Gilman.....	Treasurer
Dena Draper.....	Sergeant-at-Arms

Spring Semester, 1913.

Myrtle Shafer.....	President
Hope Gould.....	Vice President
Gladys Manweiler.....	Recording Secretary
Susan Fischbeck.....	Corresponding Secretary
Maud Gilman.....	Treasurer
Helen Brown.....	Sergeant-at-Arms

B. CHRISTIAN ASSOCIATIONS.

1. Young Men's.

Officers 1912-1913.

Ernest Talbott.....	President
Oliver E. Irons.....	Vice President
Oliver Jurgensmeyer.....	Recording Secretary
Charles Burns.....	Corresponding Secretary
P. G. Ruef.....	Treasurer

Officers 1913-1914.

Charles H. Stephens.....	President
Charles E. Winter.....	Vice President

Chester Talbott	Recording Secretary
P. G. Ruef	Corresponding Secretary
Guy Cox	Treasurer

Young Women's.

Officers 1912-1913.

Gladys Manweiler	President
Lena Clark	Vice President
Bertha Riechers	Secretary
Maud Gilman	Treasurer
Ethel Rodda	Organist
Jessie Wood	Chorister

Officers 1913-1914.

Iva Cooley	President
Edith Kelly	Vice President
Gladys Manweiler	Secretary
Maud Gilman	Treasurer
Hope Gould	Organist
Effie Medlin	Chorister

C. ASSOCIATED STUDENTS.

Organized May 18, 1889.

Officers 1912-1913.

Fall Semester.

C. L. Andrus	President
Mary Gray	Vice President
Carol K. King	Secretary
George H. Colliver	Treasurer
Charles C. Sheldon	Undergraduate Manager
Eric Brandstad	Yell Leader

Spring Semester.

C. L. Andrus	President
Mary Gray	Vice President
Carol K. King	Secretary
George H. Colliver	Treasurer
Walter M. Case	Undergraduate Manager
Eric Brandstad	Yell Leader

Classical Club.

Anna von Glahn	President
Oliver E. Irons	Secretary-Treasurer

The Philosophy Club.**Organized March 12, 1912.****Membership Limited to Upper Classmen.**

E. O. Talbott.....	President
Charles H. Stephens.....	Vice President
Amos E. Clark.....	Secretary

Assembly Speakers 1912-1913.

1912.

- October 1 Dr. H. B. Schwartz. Missionary in Japan for twenty years. Subject. Conditions in Japan.
- November Dr. Edwin Sidney Williams. D. D., presented the College with a collection of curios and addressed the students.
- November 20 Dr. Charles M. Sheldon, author and lecturer, spoke on results of a college education.
- November 24 Professor George W. Briggs, Missionary in India for some years, spoke on 'Life in India.'
- December 4 Dr. H. F. Ward, Social Service Secretary for the Methodist Church, addressed the students on the subject of Social Service .

1913.

- February 6 Bishop Edwin H. Hughes preached on the general topic of the practicality of the spiritual problems of life.
- February 16 Mr. Rolla V. Watt. President of the Board of Trustees, gave a lecture on the ruins of Yucatan, with stereopticon views.
- March 18 Bishop Francis J. McConnell, LL.D., addressed the students on the present condition of affairs in Mexico.

VESPER SERVICES.

Vesper services have been held regularly every third Sunday afternoon in the College Chapel during the past year. At each service a choir, under the direction of Miss Nella Rogers, has rendered special music and President Guth has delivered the sermons.

REGISTER OF STUDENTS

Name; major subject; units of work completed Dec. 17, 1912; home residence. Abbreviations: gr.-graduate student; sp.-special student.

Allen, James Thomas	Eng.	48	Bakersfield
Andrus, Carlton Leverett	Biol.	74	San Jose
Aoki, Yoshio	Phil.	11	San Jose
Aubert, Louisette Marie	Chem.	14	San Mateo
Barbat, Claire	French	108	San Francisco
Bonham, Alice Louise	Mus.	3	Linden
Brandstad, Eric Christopher	Biol.	47	Stockton
Brant, LeRoy Verne	Mus.	4	Petaluma
Breniman, Marie Louise	Eng.	38	San Jose
Brown, Helen Louise	Eng.	13	Hollister
Brueck, Herman Schuler	Biol.	45	Stockton
Buckley, Viola	Eng.		San Jose
Burns, Charles	Eng.	47	Rosendale, Mo.
Case, Walter Mackay	Hist.	76	Oakland
Clark, Amos Edwin	Eng.	87	Eureka
Clark, Clara Amelia	Eng.	87	San Jose
Clark, Lena Irene	Eng.	78	San Jose
Colliver, George Harrison	Phil.	55	San Jose
Comings, Grace Lunt	Chem.	14	San Mateo
Cooley, Iva Belle	Eng.	48	Berryessa
Cowan, Gurdon Andrew	Chem.	66	San Francisco
Cox, Guy	Eng.	52	Walnut Hill, Ill.
Crittenden, Vergia Lemira	Art	35	San Jose
Darke, Frederick Eugene	Eng.		San Jose
Denhart, Helen Lucile	Biol.	15	San Jose
Donovan, Bessie	Eng.	93	San Jose
Donovan, Mary Monica	French	109	San Jose
Dunne, Josephine Masten	Art	43	San Jose
Durham, Hazel Agnes	German		Kennewich, Wash.
Durston, Edmund W.	Physics	35	Lodi
Elton, Clara Belle	Mus.	7	Yolo
Everett, Charles Warren	Eng.	12	Penryn
Farrell, Amy Lenora	French	15	Salt Lake City
Fischbeck, Susan Louise	Latin	18	San Francisco
Franklin, Estelle M.	Mus.	4	San Jose

Furst, Elsie Paul	Chem.	5	San Jose
Gable, Eugene Allison	Hist.	15	Minneapolis
Gardiner, Joyce Ada	Educ.	36	Santa Barbara
Giotonini, Fred Paufero	Ger.	--	Stockton
von Glahn, Anna Luella	Latin	58	Ripon
Gober, Nancy Camelia	Phil.	15	Los Gatos
Godsman, Adah Caldwell	Bib. Sci.	16	Soquel
Gould, Anna Hope	Mus.	106	Japan
Gray, Mary Emily	Eng.	75	San Jose
Guernsey, Mary Eleanor	Hist.	10	San Jose
Ham, Allen Anthony	Hist.	15	Ceres
Ham, William Thomas	Eng.	121	Los Gatos
Hannibal, Edna Anna	Biol.	49	San Jose
Hansen, Ernest Axel	Physics	45	Sebastopol
Harker, Helene Marie	Art	9	San Jose
Harriott, William Christopher	Eng.	--	Saratoga
Haskett, Amy	German	101	Willetts
Hastings, Letitia Esther	Bib. Sci.	15	Stockton
Hirao, Ren	Phil.	16	Japan
Hitchings, Dora	Mus.	22	Berkeley
Horridge, Frederick	Biol.	60	San Jose
Irons, Oliver Eller	Hist.	99	San Francisco
Jenkinson, Ellis Lehr	Eng.	--	San Jose
Johnson, Henry Leopold	Bib. Sci.	23	San Jose
Kellogg, William Smalling	Chem.	50	San Jose
Kelly, Edith Clare	Latin	91	Hollister
Kelly, Ruth Emily	Eng.	3	Hollister
Kerr, Luvenia	Eng.	125	Dixon
King, Carol Klamm	Hist.	73	Napa
Kojima, Edward Masayoshi	Hist.	71	Japan
Kress, Estelle Louise	Eng.	10	Hoaquim Wash.
Lake, John Lloyd	Math.	32	Orland
Leak, Florence Margaret	Biol.	10	Berryessa
Learned, Roy Ernest	Hist.	44	Pacific Grove
Lindquist, George Alvin	Hist.	11	Kingsbury
Loofbourow, Leon Latimer	Educ. gr.	--	San Jose
Lovejoy, Grace Lilian	Mus.	109	Alameda
Lyon, Grace Caroline	Math.	11	Pleasant Grove
MacNair, Donald Rowat	Math.	104	Sunnyvale
Manweiler, Gladys Melrose	Eng.	46	Santa Cruz
Marriott, Lilabeth Joy	German	7	Modesto
McNeel, James Wilbur	Physics	17	Santa Barbara
Meginity, Mary Alma	Eng.	93	Oakdale
Mendenhall, Gertrude Mary	Art	16	Palo Alto
Mills, Chester E.	Hist.	15	Turlock

Moore, Mildred Morrow	Music		San Jose
Morrison, Leon Ansil	Phil.		Mayfield
Morse, Genevieve	German	15	Lodi
Mukaiyama, Masahachi	Math.	65	Japan
Nakao, Masakazu	Phil.	106	Japan
Nicholls, Earle Robert	Phil.	29	Los Gatos
Noble, Harold Albert	German	45	Stockton
Paul Forest Ellsworth, Hist. & Pol.			
Sci.		16	Pacific Grove
Pederson, Oscar Morris	Phil.	14	Hollister
Peterson, Elmore Walter	Hist.	15	Kingsbury
Poblador, Honoria Gonzaga	Educ.	124	Iloilo, P. I.
Provis, Ethel	Eng.	15	Grass Valley
Pyers, Felice Barnes	Eng.	3	Fresno
Richards, Donald Wallace	Eng.	75	San Jose
Rideout, Zoeth Ransom	Eng.	113	San Jose
Riechers, Bertha Louise	Bib. Sci.	70	San Jose
Ruef, Peter George	Eng.	47	Santa Clara
Sakuma, Henry Fumiya	Physics	51	San Jose
Shellbach, Mabel Louise	Eng.	16	San Jose
Schwartz, Anna Dale	Art	64	Japan
Scoble, Walter Howard	Mus. sp.	11	Sacramento
Shafer, Lloyd Nelson	Art	19	San Jose
Shafer, Myrtle Lucile		107	San Jose
Shafer, Ray Adrion	Physics	40	Brentwood
Sheldon, Charles Crim	Math.	117	Colfax
Shibata, Frank S.	Phil. sp.	12	San Jose
Stephens, Charles Henry	Phil.	27	San Francisco
Sweetser, Paul Greene	Eng.	15	Santa Barbara
Talbott, Ernest Orwin	Phil.	80	San Jose
Turton, Franklin Earle	Chem.	62	Berkeley
Vance, William Presley	Sp.		San Jose
Wada, Yeichi	Pol. Sci.	80	San Jose
Walther, Christine	Eng.	72	Oakdale
Whitaker, Wesley Rudisill	Hist.	32	Oakland
Wiggins, Harold B.	Math.	17	Sebastopol
Winter, Charles Edward	Phil.	25	San Francisco
Withrow, Alton Linn	Hist.	33	San Jose
Wood, Katharine	Eng.		San Jose
Wood, Jessie Belle	Eng.	24	Ceres
Wood, Mary L.	Music	13	Aberdeen, Wash
Yamada, Hideo	Math.	16	San Jose
Young, Mahlon Birch	Phil.	44	Redwood City

Total -----122

DEGREES CONFERRED

April 23, 1912

Honorary

Doctor of Divinity

Christopher Hermann von Glahn, A. B. U. P. '90, B. D. Drew, '93
 Edwin Sidney Williams, A. B. Yale '60

Master of Arts

Eiko Nagai, A. B. C. P. Dec. '11

Bachelor of Arts

William Nathan MacChesney, (nunc pro tunc '98)

In Course

Master of Arts

Marshall John Rutherford, A. B., U. P. '10, Graduate Student,
 University of California, 1910-1912

Thesis: "The Right of Access of an Upland Owner to
 Navigable Water"

Bachelor of Arts

Gideon Berger	Eiko Nagai
John Gill	Arthur G. Peterson
Elton Marion Hogg	Henry Frederick Wilke
Leslie Constant Kelley	Mahlon John Williams
Charlotte Jane Wythe	

Bachelor of Music

Alma Bennett	Elvesta Isabel Ehrhardt
Agnes Marie Christiansen	Lillian Benita Griffin
Victor Doux Ehle	Malinda Augusta Klahn
Mary Nicolds Meredith	

Diploma Art Course

Louise Pearl Arnold	Nels Edwin Johnson
Eva Mildred Baugh	Ethelyn Adeline Leslie

CHARGES NOT NOTED ELSEWHERE

Diploma fee.....	\$10.00
Student Body fee (each semester).....	4.00
Deposit fee in boarding halls (unused part to be re- mitted) each semester.....	2.50
Deposit for key in boarding halls.....	.50



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